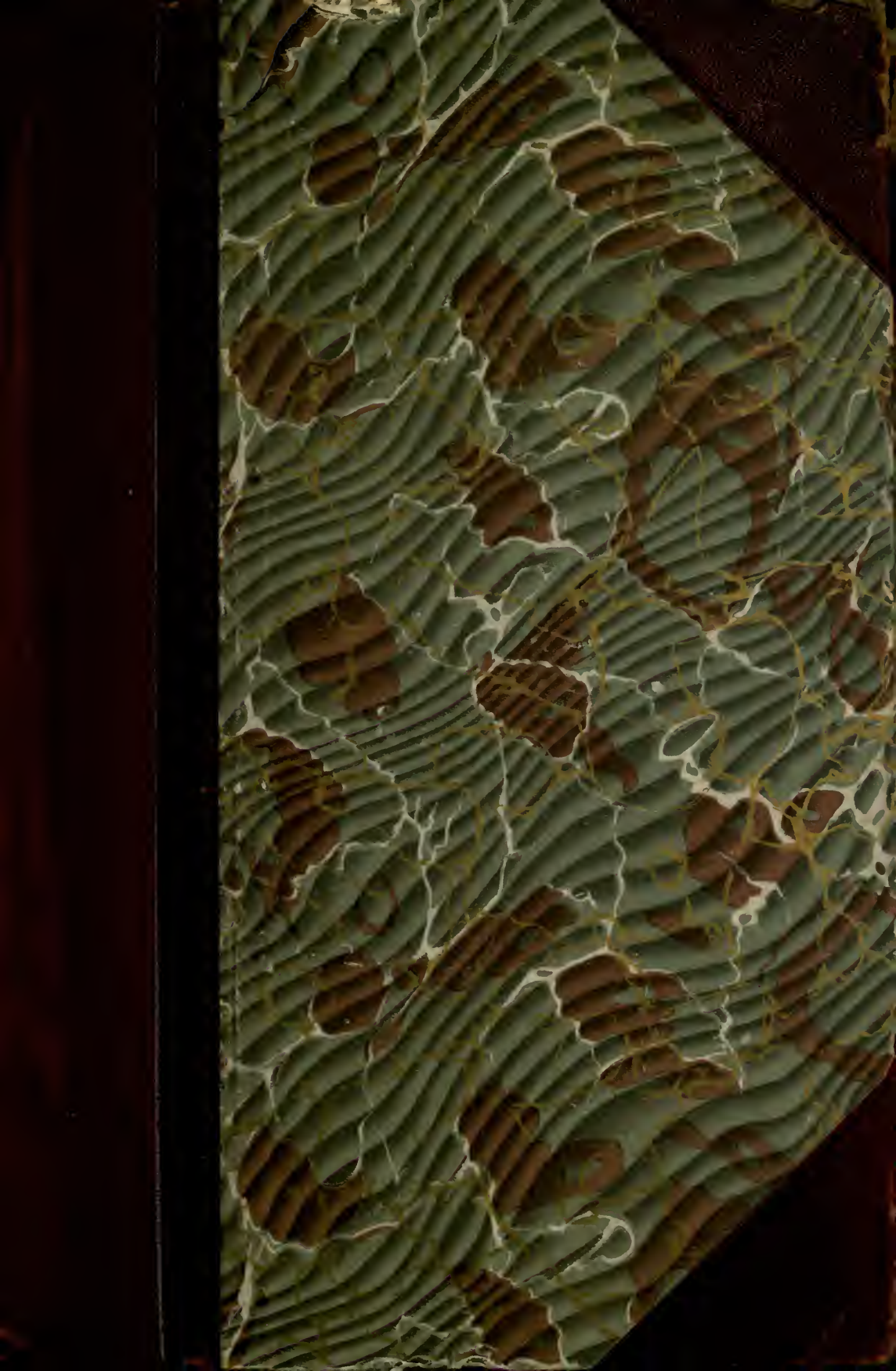

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WITH THE WORLD'S GREAT TRAVELLERS

SPECIAL EDITION

WITH THE WORLD'S GREAT TRAVELLERS

EDITED BY CHARLES MORRIS AND DELYSE E. D. LEIGH

THE TRAVELLER REMEMBERED AT HOME

VOL. VIII

CHICAGO
UNION BOOK COMPANY
1901

SPECIAL EDITION

WITH THE WORLD'S GREAT TRAVELLERS

EDITED BY CHARLES MORRIS
AND OLIVER H. G. LEIGH

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WITH THE WORLD'S GREAT TRAVELLERS.

THE WORLD'S GREAT CAPITALS OF TO-DAY.

OLIVER H. G. LEIGH.

Montreal, Quebec, Melbourne, Sydney.

The beautiful city of the Royal Mount is the largest in the Dominion of Canada, but Quebec is the capital of the province to which they both belong, and Toronto is the capital of the province of Ontario. The Federal capital is the smaller city of Ottawa. Two hundred and fifty years ago the French missions to the Indians discovered the advantages of so commanding a site for a settlement. The founder of the city named it Ville-Marie, desiring it to become a religious centre. It gradually asserted its value as a port and so developed into a great commercial city, getting its present name from the noble mount that crowns its charming terraces. Those who have made the trip along the broad St. Lawrence know how Montreal stands on the island, about thirty miles by seven, formed at the junction of that great river and the Ottawa. From its heights views of great beauty and variety can be enjoyed.

Quebec used to catch the trade of the ocean steamers, as the channel was too shallow to allow them to go beyond, being only eleven feet deep; but in 1851 the people of Montreal deepened the river to twenty-seven feet and thus secured the bulk of the trade. The population of Mon-

treal is now about three hundred thousand, while that of Quebec stands at sixty-three thousand, though still a great and thriving seaport. An inclined railway conveys the sightseer to the summit of Mount Royal, where he can feast his eyes on one of the fairest panoramic landscapes on the continent. A highly cultivated and thickly wooded country stretches far on either hand, bounded on one side by the Two Mountains and the lakes of St. Louis, and in the distance by the Adirondacks and the Green Mountains of Vermont. Below the city slopes gracefully to the river. The Lachine Falls, above the city, add a new feature to the beauty of the scene, and a little farther down are the Nun's Island and St. Helen's Isle, both rich in verdure and the latter laid out as a public park. Between these islands the famous Victoria Bridge crosses the river. When this was built, in 1860, it was the wonder of the world as a novel feat of engineering. It does not add to the picturesqueness of the scenery by its long dead line, without attempt at ornamentation, yet it receives a full meed of admiration from scientific and practical men. It is a square tube of wrought iron, about two miles long, supported by twenty-four piers of stone, sharpened, as may be said, to cut the floating ice as it rushes down every spring.

The Lachine Falls, or St. Louis Rapids, are caused by an impediment up-stream which diverts the water into the St. Louis lake at a height of over forty feet above the harbor level. The channel being thus narrowed to about half a mile wide, the river rushes through at the rate of eighteen miles an hour, forming the rapids. While no vessels can go up the falls, light-draught ships come down in safety, and the up-stream traffic is carried on by means of the Lachine Canal, which makes a detour of nine miles before joining the upper river. The water power here gained turns the wheels of many mills and factories.

The city is impressive by its forest of spires and ecclesiastical landmarks. The people are largely, if not mainly, of French descent, and that language is commonly spoken. Many are the indications of their continued love for the fatherland. It is noticeable in the names of streets and churches. In the Place d'Armes stands the imposing parish church of Notre Dame, in which ten thousand worshippers can assemble. The Cathedral of St. Peter is a noble edifice. In friendly rivalry with these is the Protestant Christ Church Cathedral, in the Gothic style, and in its precincts stands a handsome memorial cross to its first bishop. There are a great number of admirable Catholic institutions, charities and schools, which add to the dignity of the city's appearance, as to comfort. The Bonsecours Market is easily known by its dome, and on its busy days the scene is reminiscent of market-days in the old towns of France. To name all the institutions which do honor to the city would be to fill these pages with a mere catalogue, but the McGill University, founded by a Scotchman early in the century, has a claim to special mention for the vast benefit it has been to Canada, and also as one of the lions of the city.

Quebec is a pleasant sail down the St. Lawrence from Montreal. As the ancient capital of Canada it has many features of peculiar interest, historical, literary and social. It is also the most picturesque and strongly fortified city in North America. Like the rock of Gibraltar, the rock of Quebec bristles with engines of war, and on the opposite bank of the river are forts, ready to challenge any foreign invader. The traveller whose passion is history makes his way first to the memorable Plains of Abraham, where both heroes fell, the English General Wolfe and the French General Montcalm. On the field of battle a stately col-

umn marks the spot where Wolfe died in the hour of victory, on September 13, 1759. In the Governor's garden, overlooking the St. Lawrence, a similar monument commemorates Montcalm.

The citadel covers forty acres, and is a strong fortification. One of the favorite sights is the daily drill of the regiments, and the general military activity, changing sentries, bodies of troops moving through the streets, and the splendid music by the regimental bands is a great delight to the people. The old town streets are as narrow and tortuous as those in the provincial towns of France. The popular mode of threading these irregular thoroughfares is by riding in the calash, a vehicle peculiar to Quebec, on two wheels. There is a quaint charm in wandering over the ups and downs of the famous old city, and plenty to keep one wide-awake.

The glory of Quebec is its famous promenade, Dufferin Terrace, named in honor of the former Governor-General. This grand terrace runs for fourteen hundred feet along the edge of a cliff two hundred feet high, commanding a magnificent prospect. Several of the old gates remain as memorials of the time when it was a walled city.

Toronto is a flourishing city of two hundred thousand inhabitants. Its streets are in contrast with those of Montreal and Quebec, being planned to cross at right angles on the American model. It is situated on a sheltered bay which affords a commodious harbor. Its central thoroughfare, Yonge Street, was constructed as a military road, in 1796, and it goes as far as Lake Simcoe, thirty miles away. The provincial legislature meets in the handsome building in Queen's Park, with the university as a near neighbor, a handsome edifice in the Norman style. Toronto has a great interest in the shipping trade on the lakes, and is rapidly adding to its industries.

Canadian winters are warmed up by the love of sport which characterizes the people. In Montreal it has long been the custom to erect a huge and thoroughly artistic palace with ice blocks for stones. Thousands come from near and far to the festivals held in the palace grounds. When the electric lights add their brilliance the scene is entrancing. Snow-shoe clubs are popular, each with its blanket uniform, and they combine choral music with their moonlight games. The Canadian toboggan has found a welcome in many lands during recent years. A winter holiday has more attractions than terrors for most strangers after the first few days. The air is cold, dry and bracing. The energy of the people is remarkable. Canada has its titled magnates, its great philanthropists, its scholars and writers, and has sent its volunteer soldiers to share the perils and honors of England's wars. It also offers the finest mountain scenery, in the Selkirk range, as another inducement to travellers to make its closer acquaintance.

Melbourne is the most populous city in Australasia. To appreciate its position fairly it is necessary to consider its age, which is to say, its youth, and the good use it has made of it. Chicago has in Melbourne a worthy rival claimant for the distinction of being the champion city in rapidity of development. Melbourne stands as advantageously at the head of Port Philip Bay as Chicago does on Lake Michigan. It was in 1835 that John Fawkner, the first white man who went there to live, sailed up the Yarra in his boat, happily named the "Enterprise." He had not gone far before he was stopped by a waterfall. He found himself in a forest of wattle trees in full bloom, scenting the air all around. Here he decided to stay and watch results. The blows of his axe as he felled a tree frightened flocks of beautiful white cockatoos that flew around like so many winged

harbingers of good luck. The little space Fawkner cleared is the centre of Melbourne, the largest city of the largest island in the world. Within fifteen years it had a population of twenty-five thousand, little short of that of Chicago at the same date. Now it numbers half a million. Considering that Australia lies right across the globe, and was as blank a land as Darkest Africa, the record of Melbourne is phenomenal.

Like Chicago it first took the native name, Dootigala. For reasons of its own, very practical, its more fashionable quarter called itself Williamstown, after the king. The inland district chose to be known as Melbourne, in honor of Queen Victoria's first premier. The province was separated from New South Wales in 1851, and retains the name Victoria. The discovery of gold about that time gave Melbourne its rank as capital of the colony.

The traveller who lands at Melbourne as it is to-day might fancy himself in an American city as to the arrangement of the streets and general character of the people. The streets cross at right angles, and the general run of the public and private buildings indicate prosperity and excellent taste. Collins Street will hold its own against the chief shopping street in any town of its size. Bourke Street is as busy over commercial transactions on large lines as London and New York in their degree. As a city Melbourne is well and wisely planned. The streets are ninety-nine feet wide, and there are squares and parks in abundance. The public buildings have been put where they can be seen to advantage. The usual civic halls and institutions are on the English model. The town hall, for instance, is not only a home for the city authorities, but it provides a handsome hall for public gatherings, in which is a splendid organ, public recitals being frequently given. Each of the suburbs that rank as independent municipalities has a town hall of

PARISH CHURCH OF NOTRE DAME AND SQUARE, MONTREAL

its own. The colonists carried with them the love of the old country's time-honored sports. Costly cricket grounds and race-courses flourish. The annual race for the Melbourne cup attracts between one and two hundred thousand spectators. Australian cricketers have always equalled and frequently surpassed the English players in skill. The Protestants and Catholics have a cathedral each. The University, the Museum, and art galleries keep pace with the times. The working population largely own their homes. Snow is unknown. In general the climate is fine and equable. The people have prospered, despite a fair share of the troubles from which no community is free. When trade and politics come into conflict there is sure to be temporary stagnation. The Melbourne press is influential, brilliant, and clean-handed. Not a few of the ablest among prominent English statemen took active part in the earlier public life of the colony, notably Robert Lowe, afterwards Lord Sherbrooke; Sir Hugh Childers, Sir Charles Gavan Duffy, and the premier of Queen Victoria and King Edward VII., Lord Salisbury. Melbourne has given several conspicuously gifted writers to the world. It has done little in the way of boasting, until a recent claim startled American ears. The following is taken from a London daily: "America is proud of its big trees, but Australia would probably be awarded first prize in a competition between the two continents under this head. Has a church service ever been held in America in the hollow of a tree? That event recently took place in Gippsland, the eastern province of Victoria. A giant eucalyptus, or 'gum tree,' had been cut through at a distance of twenty feet from the ground. The remaining part of the trunk was then hollowed out and roofed overhead. A room twenty-five feet in breadth was thus formed. It was found capable of accommodating a congregation of fifty. But it is not to be permanently used

as a church. Its owner intends converting it soon into a creamery.

Sydney, the capital of New South Wales, is the oldest of Australian cities, having been founded in January, 1788. The celebrated Captain Cook named the entire eastern part of Australia New South Wales in 1770. England determined to make it a penal settlement. The first fleet with its cargo of convicts had to push past a barrier of cliffs in search of fresh water, and on finding it the human freight was unloaded, which was the origin of Sydney. The little colony of unwilling pilgrims numbered 756 "persons." By the influx of British capitalists and settlers the population is now well on to half a million. The capital stands on the shore of Port Jackson, one of the great harbors of the world, and the surrounding scenery is exceedingly fine. Its sea frontage is over twelve miles of bold cliffs and charming beaches. It is the only capital whose inhabitants have to go no farther than their own outskirts for seashore resorts of the most attractive character. On the shore are the Inner and Outer Domains, on which are Government House with its grounds, and a grand public park. The principal race-course is that of Hyde Park, with statues of Prince Albert and Captain Cook. The botanical gardens overlook the anchorage of the men-of-war. The colony owns a substantial fleet, by arrangement with the home government. Differing from Melbourne and other new cities, Sydney, in the old quarters at least, has an irregularity characteristic of English towns. The newer portions conform to the latest ideals of handsome town-building. The Sydney people enjoy life with a heartiness that contrasts with the grim monotony observable in so many large cities in England and America. Nature has lavished its best gifts in such profusion that the population cannot help being happy.

A new departure of the first importance in the history of the colony was signalized on the first day of the new century by the formal initiation of the new Commonwealth of Australia. The policy of federation has been discussed for years, but many difficulties had to be met. The general sentiment was that, if federated, the several colonies are strong enough to manage their own affairs without submitting everything to the home government. New Zealand was urged to join but, for reasons to be noticed later on, that colony decided to remain independent. The five continental colonies and Tasmania joined the federation as original states. The new constitution is like that of Canada except that the powers of the Central Parliament are limited by the provincial bodies. The capitals of the two larger states have been described. Next comes Queensland, the northeastern portion of the continent, which has quite a number of flourishing ports and towns besides its capital, Brisbane, a city of one hundred and twenty-five thousand inhabitants.

Tasmania is an island which lies off the southern coast. The last of the aboriginal natives died in 1876. It was also a penal settlement under its original name, Van Diemen's Land. Transportation of convicts was abolished in 1853 and its name changed to Tasmania. The island is free from the hot winds of the continent, there is general prosperity and an increasing population. The capital is Hobart, with about forty-two thousand inhabitants. Western Australia explains itself. The land is rich in valuable timber, of its great trees the several varieties of eucalyptus are found in great abundance. The climate is exceedingly healthy and delightful. Country life is enjoyed to the full, always with the possibility of a gold-mine being found under the back garden. The famous Coollardie gold-fields are in this region, and the soil is as fertile as any in the

world. Perth is the capital, a flourishing city of thirty-five thousand people.

South Australia came into formal existence as a separate province in 1836. It has an area of over nine hundred thousand square miles, being twice that of Germany and France combined, and fifteen times that of England and Wales. The climate is that of southern France and Italy. Its capital, the city of Adelaide, ranks next after Melbourne and Sydney, with a population of one hundred and fifty thousand. These six provinces form the new Commonwealth.

New Zealand is a colony consisting of three islands in the South Pacific ocean, east of New South Wales. In the first convention to promote federation the representative from New Zealand stated that there were twelve hundred reasons against the inclusion of his colony in the scheme, these being the twelve hundred miles of sea that separate its capital, Wellington, from Melbourne.

It is a remarkable colony and has made remarkable progress. It was explored by Tasman as far back as 1642 and was visited in 1777 by Captain Cook, but its colonization dates from 1839. Its area is about one hundred and five thousand square miles, a little smaller than Great Britain and Ireland, and it is a splendid agricultural and grazing country. Sheep-raising is one of its chief sources of wealth. There is a population of three-quarters of a million, of whom forty thousand are native Maories. Wellington has about fifty thousand inhabitants, Auckland sixty-six, Dunedin fifty, Christchurch fifty-five, with several smaller cities and towns.

New Zealand has a wealth of scenery unsurpassed anywhere. Its wonderful hot springs and natural terraces are described elsewhere in this work by James Anthony Froude. An earthquake has since destroyed some of the scenes he so

eloquently depicts. The traveller will find the climate and natural charms of New Zealand very fascinating. Not less remarkable are its people in respect of their progressive spirit. The legislation of the colony has been more daring, its people more unconventional and its trade more prosperous for a long period than has been the case with any other British colony. Its isolation from Australia has developed an independence and an originality supposed to be peculiar to Americans. Climate and the kindness of nature in yielding abundance of her store have wrought upon the spirit of the people. They have enjoyed—in the fullest sense of the word—absolute freedom in self-government, unaffected by the legislation or bias of the Australian government. Their land laws have surprised some of the older and less venturous legislatures. In commercial affairs they have played for their own hand. Even in minor matters, if social life is to be so classed in this connection, New Zealand has boldly adopted policies which the outer world would not have dared to try, even if the idea had occurred, but which it adopted when New Zealand showed the way. As instances take the short-skirt bicycle costume for women, and the surpliced and capped women choirs in churches, both of which originated in New Zealand.

HAUNTS AND HABITS OF THE GORILLA.

PAUL DU CHAILLU.

(From "Equatorial Africa," copyright 1890 by Harper & Brothers.)

[Paul Du Chaillu, born in France in 1835, and subsequently a citizen of the United States, spent years in Africa, travelling in its interior in 1856–59, and again in 1863–65. He claims to have been the first man to penetrate the great equatorial forest, and was the first to

observe and hunt the gorilla in its native haunts. His stories about this great man-like ape were long discredited, but are now fully accepted. He is the author of "Explorations and Adventures in Equatorial Africa," and various other works. We select from his writings an account of his early experience with the gorilla, beginning with his first sight of that animal.]

AND now that civilization of which I had mused so pleasantly a few minutes before received another shock. My men cut off the head of the snake [a huge serpent which he had just shot], and, dividing the body into proper pieces, roasted it and ate it on the spot; and I—poor, starved, but *civilized* mortal!—stood by, longing for a meal; but after a while I had to learn also how to eat snake or starve.

When the snake was eaten, we began to look about the ruins of the village near where we sat. A degenerate kind of sugar-cane was growing on the very spot where the houses had formerly stood, and I made haste to pluck some of this and chew it for the little sweetness it had. But, as we were plucking, my men perceived what instantly threw us all into the greatest excitement. Here and there the cane was beaten down, torn up by the roots, and lying about in fragments which had evidently been chewed.

I knew that these were fresh tracks of the gorilla, and joy filled my heart. My men looked at each other in silence, and muttered *Nguyla*, which is as much as to say in Npongwe, *Ngina*, or, as we say, gorilla.

We followed these traces, and presently came to the footprints of the long-desired animal. It was the first time I had ever seen these footprints, and my sensations were indescribable. Here was I now, it seemed, on the point of meeting face to face that monster of whose ferocity, strength, and cunning the natives had told me so much; an animal scarce known to the civilized world, and which no white man before had hunted. My heart beat

till I feared its loud pulsations, and my feelings were really excited to a painful degree.

By the tracks it was easy to know that there must have been several gorillas in company. We prepared at once to follow them.

The women were terrified, and we left them a good escort of two or three men to take care of them and reassure them. Then the rest of us looked once more carefully at our guns,—for the gorilla gives you no time to reload, and woe to him whom he attacks! We were armed to the teeth. My men were remarkably silent, as they were going on an expedition of more than usual risk; for the male gorilla is literally the king of the African forest. . . .

As we followed the tracks we could easily see that there were four or five of them; though none appeared very large. We saw where they had run along on all fours, the usual mode of progression of these animals; and where, from time to time, they had seated themselves to chew the canes they had borne off. The chase began to be very exciting. . . .

We descended a hill, crossed a stream on a fallen log, and presently approached some huge boulders of granite. Alongside of this granite block lay an immense dead tree, and about this we saw many evidences of the very recent presence of the gorillas.

Slowly we pressed on through the dense brush, fearing almost to breathe lest we should alarm the beasts. Makinda was to go to the right of the rock, while I took the left. Unfortunately, he circled it at too great a distance. The watchful animals saw him. Suddenly I was startled by a strange, discordant, half-human, devilish cry, and beheld four young gorillas running towards the deep forests. We fired, but hit nothing. Then we rushed on in

pursuit; but they knew the woods better than we. Once I caught a glimpse of one of the animals again, but an intervening tree spoiled my aim, and I did not fire. We ran till we were exhausted, but in vain. The alert beasts made good their escape.

As I saw the gorillas running—on their hind legs—they looked fearfully like hairy men; their heads down, their bodies inclined forward, their whole appearance was like men running for their lives. Take with this their awful cry, which, fierce and animal as it is, has yet something human in its discordance, and you will cease to wonder that the natives have the wildest superstitions about these "wild men of the woods."

[A few days afterwards a hunt was undertaken in which they saw tracks of the animal, and some of the party fired at and wounded a female, but had no further success. The next day they set out again.]

We started early, and pushed for the most dense and impenetrable part of the forest, in hopes to find the very home of the beast I so much wished to shoot. Hour after hour we travelled, and yet no sign of gorilla. Only the everlasting little chattering monkeys,—and not many of these,—and occasionally birds. In fact, the forests of this part of Africa are not so full of life as in some other parts to the south.

Suddenly Miengai uttered a little *cluck* with his tongue, which is the native's way of showing that something is stirring, and that a sharp lookout is necessary. And presently I noticed, ahead of us seemingly, a noise as of some one breaking down branches or twigs of trees.

This was the gorilla, I knew at once by the eager and satisfied looks of the men. They looked once more carefully at their guns, to see if by any chance the powder had fallen out of the pans; I also examined mine, to make sure that all was right; and then we marched on cautiously.

The singular noise of the breaking of tree branches continued. We walked with the greatest care, making no noise at all. The countenances of the men showed that they thought themselves engaged in a very serious undertaking; but we pushed on, until finally we thought we saw through the thick woods the moving of the branches and small trees which the great beast was tearing down, probably to get from them the berries and fruits he lives on.

Suddenly, as we were creeping along, in a silence which made a heavy breath seem loud and distinct, the woods were filled with the tremendous barking roar of the gorilla. Then the underbrush swayed rapidly just ahead, and presently before us stood an immense male gorilla.

He had gone through the jungle on all fours; but when he saw our party, he raised himself erect and looked us boldly in the face. He stood about a dozen yards from us, and was a sight I think I shall never forget. Nearly six feet high (he proved four inches shorter), with immense body, huge chest, and great muscular arms, with fiercely-glaring large deep-gray eyes, and a hellish expression of face, which seemed to me like some nightmare vision; thus stood before us this king of the African forest.

He was not afraid of us. He stood there, and beat his breast with his huge fists till it resounded like an immense bass-drum, which is their mode of offering defiance; meantime giving vent to roar after roar.

The roar of the gorilla is the most singular and awful noise heard in these African woods. It begins with a sharp *bark*, like an angry dog, then glides into a deep bass *roll* which literally and closely resembles the roll of distant thunder along the sky, for which I have sometimes been tempted to take it where I did not see the animal. So deep is it that it seems to proceed less from the mouth and throat than from the deep chest and vast paunch.

His eyes began to flash fiercer fire as we stood motionless on the defensive, and the crest of short hair which stands on his forehead began to twitch rapidly up and down, while his powerful fangs were shown as he again sent forth a thunderous roar. And now, truly, he reminded me of nothing but some hellish dream-creature,—a being of that hideous order, half man, half beast, which we find pictured by old artists in some representations of the infernal regions. He advanced a few steps, then stopped to utter that hideous roar again; advanced again, and finally stopped when at a distance of about six yards from us. And here, just as he began another of his roars, beating his breast in rage, we fired and killed him.

With a groan which had something terribly human in it, and yet was full of brutishness, he fell forward on his face. The body shook convulsively for a few minutes, the limbs moved about in a struggling way, and then all was quiet,—death had done its work, and I had leisure to examine the huge body. It proved to be five feet eight inches high, and the muscular development of the arms and breast showed what immense strength it possessed.

My men, though rejoicing at our luck, immediately began to quarrel about the apportionment of the meat, for they really eat this creature. I saw that they would come to blows presently if I did not interfere, and therefore said I would myself give each man his share, which satisfied all. As we were too tired to return to our camp of last night, we determined to camp here on the spot, and accordingly soon had some shelters erected and dinner going on. Luckily one of the fellows shot a deer just as we began to camp, and on its meat I feasted while my men ate gorilla.

I noticed that they very carefully saved the brain, and was told that charms were made of this,—charms of two kinds. Prepared in one way, the charm gave the wearer

a strong hand for the hunt, and in another it gave him success with women. This evening we had gorilla stories again, but all to the same point already mentioned,—that there are gorillas inhabited by human spirits.

[We may conclude with a brief description of the habits of this animal, as given by Du Chaillu.]

It is my good fortune to be the only white man who can speak of the gorilla from personal knowledge; and while my experience and observation prove that many of the actions reported of it are false and vain imaginings of ignorant negroes and credulous travellers, I can also vouch that no description can exceed the horror of its appearance, the ferocity of the attack of the male, or the impish malignity of its nature. . . .

It lives in the loneliest and darkest portions of the dense African jungles, preferring deep wooded valleys and also rugged heights. The high plains, also, whose surface is strewn with immense boulders, seem to be favorite haunts. Water occurs everywhere in this part of Africa, but I have noticed that the gorilla is always found very near to a plentiful supply.

It is a restless and nomadic beast, wandering from place to place, and scarce ever found for two days together in the same neighborhood. In part this restlessness is caused by the struggle it has to find its favorite food. The gorilla, though it has such immense canines, and its vast strength doubtless fits it to capture and kill almost any animal which frequents the forests, is a strict vegetarian. I examined the stomachs of all which I was lucky enough to kill, and never found traces of aught but berries, pineapple-leaves, and other vegetable matter. It is a huge feeder, and no doubt soon eats up the scanty supply of its natural food which is found in any limited space, and is then forced to wander

on in constant battle with famine. Its vast paunch, which protrudes before it when it stands upright, proves it to be a great feeder; and, indeed, its great frame and enormous muscular development could not be supported on little food.

It is not true that it lives much or at all on trees. I found them almost always on the ground, although they often climb the trees to pick berries or nuts; but after eating they return to the ground. By the examination of the stomach of many specimens, I was able to ascertain with tolerable certainty the nature of its food, and I discovered that, for all *I* found, it had no need to ascend trees. It is fond of the wild sugar-cane, especially fond of the white ribs of the pineapple-leaf, and also eats the pith of some trees, and a kind of nut with a very hard shell. This shell is so hard that it requires a strong blow with a heavy hammer to break it; and here is probably one purpose of that enormous strength of jaw which long seemed to me thrown away on a non-carnivorous animal, and which is sufficiently evidenced by the manner in which the barrel of the musket of one of my unfortunate hunters was flattened by an enraged male gorilla.

Only the young gorillas sleep on trees, for protection from wild beasts. I have myself come upon fresh traces of a gorilla's bed upon several occasions, and could see that the male had seated himself with his back against a tree-trunk. In fact, on the back of the male gorilla there is generally a patch on which the hair is worn thin from this position; while the nest-building *Troglodytes calvus*, or bald-headed *nshiego*, which constantly sleeps under its leafy shelter on a tree-branch, has this bare place at its side, and in quite a different way. I believe, however, that while the male always sleeps at the foot of a tree, or elsewhere on the ground, the female and young may sometimes ascend to the tree-top, as I have seen marks of such ascension.

Of adults I found almost always one male with one female, though sometimes the old male wanders companionless. In such cases, as with the "rogue" elephant, he is particularly morose and malignant, and dangerous to approach. Young gorillas I found sometimes in companies of five; sometimes less, but never more. The young always run off on all-fours, shrieking with fear. They are difficult to approach, as their hearing is acute, and they lose no time in making their escape, while the nature of the ground makes it hard for the hunter to follow after. The adult animal is also shy, and I have hunted all day at times without coming upon my quarry, when I felt sure that they were carefully avoiding me. When, however, at last fortune favors the hunter, and he comes accidentally or by good management upon his prey, he need not fear its running away. In all my hunts and encounters with this animal, I never knew a grown male to run off. When I surprised a pair of gorillas, the male was generally sitting down on a rock or against a tree, in the darkest corner of the jungle, where the brightest sun left its traces only in a dim and gloomy twilight. The female was generally feeding close by; and it is singular that she almost always gave the alarm by running off with loud and sudden cries.

The common walk of the gorilla is not on its hind legs, but on all-fours. In this posture the arms are so long that the head and breast are raised considerably, and as it runs the hind legs are brought far beneath the body. The leg and arm on the same side move together, which gives the beast a curious waddle. It can run at great speed. The young, parties of which I have often pursued, never took to trees, but ran along the ground; and at a distance, with their bodies half erect, looked not unlike negroes making off from pursuit: the hind legs moved between the arms, and those were somewhat bowed outward. I have never

found the female to attack, though I have been told by the negroes that a mother with a young one in charge will sometimes make fight. It is a pretty thing to see such a mother with the baby gorilla sporting about her. I have watched them in the woods till, eager as I was to obtain specimens, I had not the heart to shoot. But in such cases my negro hunters exhibited no tender-heartedness, but killed their quarry without loss of time.

When the mother runs off from the hunter, the young one grasps her about the neck, and hangs beneath her breast with its little legs about her body.

The strength of the gorilla is evidently enormous. That with its jaws it can dent a musket barrel, and with its arms break trees from four to six inches in diameter, sufficiently proves that its vast bony frame has corresponding muscle. The negroes never attack them with other weapons than guns, and in those parts of the far interior where no European guns had yet reached, as among the Apingi, this great beast roamed unmolested, the monarch of the forest. To kill a gorilla gives a hunter a life-long reputation for courage and enterprise even among the bravest of the negro tribes, who are generally, it may be said, not lacking in this quality of courage. . . .

It uses no artificial weapon of offence, but attacks always with its arms, though in a struggle no doubt the powerful teeth would play a part. I have several times noticed skulls in which the huge canines were broken off, not worn down, as they are in almost all the adult gorillas, by gnawing at trees which they wished to break, and which, without being gnawed into, are too strong even for them. The negroes informed me that such teeth are broken in combats between the males for the possession of a female, and I think this quite probable. Such a combat must form a magnificent and awful spectacle. A struggle between two

well-matched gorillas would exceed, in that kind of excitement which the Romans took delight in, anything in that line which they were ever gratified with.

In height adult gorillas vary as much as men. The adult males in my collection range from five feet two inches to five feet eight.

[Du Chaillu found the gorilla absolutely untamable. He had in captivity a young one, between two and three years old, and two feet six inches high, which he made every effort to subdue by kindness, but found it so fierce and intractable that all his efforts proved unavailing. Starving was tried, but nothing seemed capable of subduing its savage temper. After something more than a month of captivity it died suddenly, continuing violent and untamable to the end. The hunter shipped a live gorilla for Europe, but it died on the way, and he had only museum specimens to offer in attestation of his narrative.]

BATTLING WITH THE CONGO SAVAGES.

HENRY M. STANLEY.

(From "Through the Dark Continent," copyright 1878 by Harper & Brothers.)

[Of all the explorers of the "Dark Continent," the names of two men stand particularly high, for their undaunted perseverance and the value of their discoveries, those of Livingstone and Stanley. The latter first gained reputation through his expedition in search of the former. Subsequently he crossed Africa, making discovery of the great Congo River system, and at a later date made a third great expedition for the release of Emin Pasha. In his Congo expedition, as described in his "Through the Dark Continent," Stanley's experiences differed essentially from that of other explorers. African travellers have met with endless difficulties, through the avarice, faithlessness, and procrastination of African chiefs, but have experienced little difficulty from hostile warlike demonstrations. Stanley, on the contrary, found

himself in the midst of the most savage and warlike of the African tribes, and had to fight his way down the great river for weeks, only his dauntless courage and resolution enabling him to overcome the opposition of the cannibal tribesmen. We can do no better, in selecting from "Through the Dark Continent," than to tell the story of one of these fierce battles, which would have turned back any man of less energy and determination. We take up the adventurers on the Livingstone (now the Congo) River, when they were passing the populous island of Mpika. The expedition at the time was in a perilous condition from sickness, "the small-pox was raging, dysentery had many victims," and other diseases abounded, two or three bodies being daily consigned to the deep waters of the Livingstone. Between the 14th and the 18th of December (1876) there were five deaths from small-pox. Our story begins on the 18th.]

THE crest of the island was about eighty feet above the river, and was a marvel of vegetation, chiefly of plantain and banana plantations. On the left rose the other bank with similar wooded heights, dipping occasionally into small creeks and again rising into ridges, with slopes, though steep, clothed with a perfect tangle of shrubs and plants.

After a descent of ten miles by this channel, we found the river increased in width to two thousand yards. While rowing down, close to the left bank, we were suddenly surprised by hearing a cry from one of the guards of the hospital canoes, and, turning round, saw an arrow fixed in his chest. The next instant, looking towards the bank, we saw the forms of many men in the jungle, and several arrows flew past my head in extremely unpleasant proximity.

We sheered off instantly, and, pulling hard down-stream, came near the landing-place of an untenanted market-green. Here we drew in-shore, and sending out ten scouts to lie in wait in the jungle, I mustered all the healthy men, about thirty in number, and proceeded to construct a fence of brushwood, inspired to unwonted activity by a knowledge of our lonely, defenceless state.

Presently a shriek of agony from another of my men rang out through the jungle, followed immediately by the sharp crack of the scouts' Snyders, which again was responded to by an infernal din of war-horns and yells, while arrows flew past us from all directions. Twenty more men were at once sent into the jungle to assist the scouts, while, with might and main, we labored to surround our intended camp with tall and dense hedges of brushwood, with sheltered nooks for riflemen.

After an hour's labor the camp was deemed sufficiently tenable, and the recall was sounded. The scouts retreated on the run, shouting as they approached, "Prepare! prepare! they are coming!"

About fifty yards of ground outside our camp had been cleared, which, upon the retreat of the scouts who had been keeping them in check, was soon filled by hundreds of savages, who pressed upon us from all sides but the river, in the full expectation that we were flying in fear. But they were mistaken, for we were at bay, and desperate in our resolve not to die without fighting. Accordingly, at such close quarters the contest soon became terrific. Again and again the savages hurled themselves upon our stockade, launching spear after spear with deadly force into the camp, to be each time repulsed. Sometimes the muzzles of our guns almost touched their breasts. The shrieks, cries, shouts of encouragement, the rattling volleys of musketry, the booming war-horns, the yells and defiance of the combatants, the groans and screams of the women and children in the hospital camp, made together such a medley of hideous sounds as can never be effaced from my memory.

For two hours the desperate conflict lasted. More than once, some of the Wangwana were about to abandon the struggle and run to the canoes, but Uledi, the coxswain, and Frank threatened them with clubbed muskets, and

with the muzzles of their rifles drove them back to the stockade. At dusk the enemy retreated from the vicinity of the clearing; but the hideous alarums produced from their ivory horns, and increased by the echoes of the close forest, still continued; and now and again a vengeful poison-laden arrow flew by with an ominous whiz to quiver in the earth at our feet, or fall harmlessly into the river behind us.

Sleep, under such circumstances, was out of the question; yet there were many weak, despairing souls whom even the fear of being eaten could not rouse to a sense of manliness and the necessity for resistance. Aware of this, I intrusted the task of keeping the people awake to Frank Pocock, Sheikh Abdallah, and Wadi Rehani, the "treasurer" of the expedition, who were ordered to pour kettles of cold water over their heads upon the least disposition to go to sleep.

At eleven P.M. a dark form was seen creeping from the bush on all fours towards our stockade. I moved quietly to where vigilant Uledi was maintaining watch and ward, and whispered to him to take two men and endeavor to catch him. Uledi willingly consented, and burrowed out through a slight opening in the fence. The eyes of those in the secret became fastened on the dim shadows of the hostile forms, so similar, it seemed to me, in their motions to a crocodile which I had seen on a rock near Kisorya in Ukerewé, as it endeavored to deceive a large diver into the belief that it was asleep while actually meditating its murder.

Soon we saw Uledi's form leap upon that of the prostrate savage, and heard him call out loud for help, which was at once given him by his two assistants; but an ominous rustling in the bushes behind announced that the cunning enemy were also on the alert, and, as they rushed to the rescue, Uledi snatched his captive's spears, and with his

EXPLORATION PARTY OF H. M. STANLEY

two friends retreated into the camp, while our guns again awoke the echoes of the forest and the drowsy men in the camp to a midnight action as brisk as it was short.

Twit, twit, fell the arrows once more in showers, piercing the brush fence, perforating the foliage, or smartly tapping the trunks and branches, while we, crouching down on the ground under the thick shadows of the brushwood, replied with shot, slugs, and bullets, that swept the base of the jungle.

Silence was soon again restored and the strict watch renewed. From a distance the poisoned reeds still pattered about us, but, protected by our snug stockade and lying low in our covert, they were harmless, though they kept us awake listening to the low whiz and reminding one another that the foe was still near.

Morning dawned upon the strange scene. The cooks proceeded to make fires, to cook some food, under the shelter of the high banks, that we might break our long fasts. Frank and I made a sufficient meal out of six roasted bananas and a few cups of sugarless coffee.

After which, giving strict orders to Frank and Sheikh Abdallah to be vigilant in my absence, the boat was manned, and I was rowed to a distance of five hundred yards from the camp towards the right bank. Then, stopping to examine the shores, I was surprised to see, only a quarter of a mile below our camp, a large town, consisting, like those above, of a series of villages in a uniform line along the high bank, while a perfect wealth of palm-trees and banana plantations proved unquestionably the prosperity of the populous district. I recollected then that the intelligent dwarf already mentioned had spoken of a powerful chief, whose district, called Vinya-Njara, possessed so many men that it would be utterly impossible to pass him.

My plans were soon made. It was necessary that we should occupy the southernmost village in order to house the sick, to obtain food for ourselves, and to keep up communication with the land division when it should announce its presence.

We rowed back to the camp, by this time the observed of a thousand heads which projected from the jungle between our camp and the first village. As nothing had been unpacked from the boat and the hospital canoes, and only the defenders of the camp had disembarked, every soul was in a few seconds seated in his place, and pulling swiftly over the intervening quarter of a mile down to the landing of the first village,—targets, it is true, for several arrows for a short time, but no one could stop to reply. Arrived at the landing, two men were detailed off to each canoe and the boat, and we rushed up the high and steep bank. The village was empty, and, by cutting some trees down to block up each end, became at once perfectly defensible.

We were not long left unmolested. The savages recovered their wits, and strove desperately to dislodge us, but at each end of the village, which was about three hundred yards long, our muskets blazed incessantly. I also caused three or four sharp-shooters to ascend tall trees along the river-bank, which permitted them, though unseen, to overlook the tall grasses and rear of the village, and to defend us from fire. Meanwhile, for the first time for twenty-four hours, the sick (seventy-two in number) were allotted one-fourth of the village for themselves, as over one-half of them were victims of the pest, of which three had died in the canoes during the fearful hours of the previous night.

The combat lasted until noon, when mustering twenty-five men, we made a sally, and succeeded in clearing the

skirts of the village for the day. Uledi caught one of the natives by the foot, and succeeded in conveying him within the village, where he was secured as a most welcome prize, through whom we might possibly, if opportunities offered, bring this determined people to reason.

Then, while the scouts deployed in a crescent form from beyond the ends of the village into the forest, the rest of our force formed in line, and commenced to cut down all grass and weeds within a distance of a hundred yards. This work consumed three hours, after which the scouts were withdrawn, and we rested half an hour for another scant meal of bananas. Thus refreshed after our arduous toil, we set about building marksmen's nests at each end of the village fifteen feet high, which, manned with ten men each, commanded all approaches. For our purpose there were a number of soft-wood logs, already prepared in the village, and bark-rope and cane-fibre were abundant in every tent, for the inhabitants of Vinya-Njara devoted themselves, among other occupations, to fishing, and the manufacture of salt from the Pistia plants.

By evening our labors were nearly completed. During the night there was a slight alarm, and now and then the tapping on the roofs and the pattering among the leaves informed us that our enemies were still about, but we did not reply to them.

The next morning an assault was attempted, for the enemy emerged from the bush on the run into the clearing; but our arrangements seemed to surprise them, for they retreated again almost immediately into the gloomy obscurities of the jungle, where they maintained, with indomitable spirit, horn-blowing and a terrific "bo-bo-boing."

We had, it seems,—though I have not had time to mention it before,—passed the tribes which emitted cries of "Ooh-hu-hu, ooh-hu, ooh-hu-hu," for ever since our arrival

at Vinya-Njara we had listened with varied feelings to the remarkable war-strains of "Bo-bo, bo-bo,—bo-bo-o-o-oh," uttered in tones so singular as to impress even my African comrades with a sense of its eccentricity.

About noon a large flotilla of canoes was observed ascending the river close to the left bank, manned by such a dense mass of men that any number between five hundred and eight hundred would be within the mark. We watched them very carefully until they had ascended the river about half a mile above us, when, taking advantage of the current, they bore down towards us, blowing their war-horns, and drumming vigorously. At the same moment, as though this were a signal in concert with those on land, war-horns responded from the forest, and I had scarcely time to order every man to look out when the battle-tempest of arrows broke upon us from the woods. But the twenty men in the nests at the corners of the village proved sufficient to resist the attack from the forest side, Frank Pocock being in charge of one, and Sheikh Abdallah of the other, while I, with twenty men lining the bushes along the water line, defended the river side.

This was a period when every man felt that he must either fight or resign himself to the only other alternative, that of being heaved a headless corpse into the river. Our many successful struggles for a precarious existence had begun to animate even the most cowardly with that pride of life that superiority creates, and that feeling of invulnerability that frequent lucky escapes foster. I was conscious, as I cast my eyes about, that my followers were conspicuously distinguishing themselves, and were at last emerging from that low level of undeveloped manhood which is the general state of men untried and inexperienced. With a number of intelligent whites, that acquisition of

courageous qualities would have been assisted by natural good sense, and a few months' hard service such as we had undergone would have sufficed to render them calm and steady in critical times; but with such people as I had, who had long shown—with the exception of a few—a wonderful inaptitude for steadiness, the lesson had taken two years. These last few days on the Livingstone River had been rapidly perfecting that compact band for the yet more dangerous times and periods to come.

Therefore, though the notes of the war-horns were dreadful, our foe numerous and pertinacious, and evidently accustomed to victory, I failed to observe one man among my people then fighting who did not seem desirous to excel even Uledi, the coxswain.

The battle had continued half an hour with a desperate energy only qualified by our desperate state. Ammunition we possessed in abundance, and we made use of it with deadly effect; yet what might have become of us is doubtful, had not the advanced guard of Tippu-Tib and our land division arrived at this critical juncture, causing dismay to the savages in the forest, who announced the reinforcement by war-horns to the savages in the canoes, many of whom were at the moment making most strenuous efforts to effect a landing. The river savages, on hearing these signals, withdrew; but as they were paddling away they proclaimed their intention of preventing all escape, either up-river or down-river, and expressed their enormous contempt for us by throwing water towards us with their paddles. We saw all the canoes mysteriously disappear behind an island situated about sixteen hundred yards off and opposite to our camp.

It was a great pleasure to greet all our people once more, though they were in a wretched plight. Bad food, and a scarcity of even that during three days in the jungle, con-

stantly losing the road, wandering aimlessly about, searching for thinly-grown spots through which they might creep more easily, had reduced their physical strength so much that it was clear at a glance that several days must elapse before they would be able to resume their journey.

When all had arrived, I called the forty defenders of the camp together, and distributing cloth to each of them, told them that as the enemy had taken their canoes behind the island opposite, they very probably intended to resume the fight; that it was, therefore, our duty to prevent that if possible by making a night expedition and cutting the canoes adrift, which would leave them under the necessity of abandoning the project of attacking us; "besides," said I, "if we can do the job in a complete way, the enormous loss of canoes will have such an effect on them that it will clear our progress down-river."

Frank Pocock was requested to take his choice of crews, and man the four little canoes, which would carry about twenty men, and, proceeding to the south end of the islet, to spread his canoes across the mouth of the channel, between the islet and the right bank, while I proceeded in the boat to the north end of the islet, and, bearing down the channel, sought out the enemy's canoes and cut them adrift, which floating down were to be picked up by him.

It was a rainy, gusty night, and dark; but at ten P.M., the hour of deepest sleep, we set out with muffled oars, Frank to his appointed position, and I up-river, along the left bank, until, having ascended nearly opposite the lower end of Mpika Island, we cut rapidly across the river to the right bank. Then, resting on our oars, we searched the bank narrowly, until, seeing a fire on the bank, we rowed cautiously in, and discovered eight large canoes, each tied by a short cable of rattan to a stake driven deep into the clay.

Uledi, Bwana Hamadi, and myself soon set these free, and, giving each a push successively far into the stream, waited a short time, and then followed them in our boat. Four other canoes were cut adrift a few hundred yards below. On coming into the channel between the islet and the bank, numerous bright fires informed us that the largest number of the enemy was encamped on it, and that their canoes must be fastened below the several camps. We distinctly heard the murmur of voices and the coughing of shivering people, or of those who indulged in the pernicious *bhang;* but gliding under the shadows of the tall banks and in the solemn blackness of the trees, we were unperceived, and canoe after canoe, each with its paddles and scoops within, was pushed into the swift stream, which conveyed it down river to where we felt assured Frank was ready with his sharp and quick-eyed assistants.

In this manner thirty-eight canoes, some of great size, were set adrift; and not being able to discover more, we followed them noiselessly down-stream until we came to Frank's canoes, which were being borne down-stream by the weight of so many. However, casting the great stone anchor of the boat, canoe after canoe was attached to us, and leaving twenty-six in charge of Frank, we hoisted sail and rowed up-stream, with twelve canoes in tow. Arriving in camp, the canoes were delivered in charge to the Wangwana, and then the boat hastily returned to lend assistance to Frank, who made his presence known to us by occasionally blowing the trumpet. After relieving him of eight more canoes, he was able almost to keep up with us to camp, where we all arrived at five A.M., after a most successful night expedition.

At nine A.M. the boat was manned again, and we rowed to the scene of our midnight labors. The island was all

but abandoned! Only a few persons were left, and to them, with the aid of our interpreters, we communicated our terms,—viz., that we would occupy Vinya-Njara and retain all the canoes unless they made peace. We also informed them that we had one prisoner, who would be surrendered to them if they availed themselves of our offer of peace; that we had suffered heavily, and they had also suffered; that war was an evil which wise men avoided; that if they came with two canoes with their chiefs, two canoes with our chiefs should meet them in mid-stream, and make blood-brotherhood; and that on that condition some of their canoes should be restored, and we would purchase the rest.

They replied that what we had spoken was quite true, but as their chiefs were some distance away in the woods, they must have time to communicate with them, but that they would announce their decision next day. We then left them, not, however, without throwing packets of shells towards them, as an earnest of our wish to be friends, and rowed to our camp at Vinya-Njara.

The forests for a distance of ten miles around Vinya-Njara were clear of enemies. The friendly natives of Mpika Island came down to our assistance in negotiating a peace between us and the surly chiefs, who had all withdrawn into the forests on the right bank.

On the 22d December, the ceremony of blood-brotherhood having been formally concluded, in mid-river, between Safeni and the chief of Vinya-Njara, our captive and fifteen canoes were returned, and twenty-three canoes were retained by us for a satisfactory equivalent, and thus our desperate struggle terminated. Our losses at Vinya-Njara were four killed and thirteen wounded.

[This contest, so vividly described, was but one of twenty-eight desperate battles Stanley had with the hostile savages, some of them

fought while making portages through the woods around the succession of rapids and cataracts known as Stanley Falls, until they passed the realm of hostiles and reached friendly natives on the banks of the great Congo. We may follow this scene of battle and bloodshed with a picturesque description of insect life at the confluence of the Livingstone and Lowwa Rivers.]

In such cool, damp localities as the low banks near the confluence of these two important streams, entomologists might revel. The Myriapedes, with their lengthy sinuous bodies of bright shiny chocolate or deep black color, are always one of the first species to attract one's attention. Next come the crowded lines of brown, black, or yellow ants, and the termites which, with an insatiable appetite for destruction, are ever nibbling, gnawing, and prowling. If the mantis does not arrest the eye next, it will most assuredly be an unctuous earth caterpillar, with its polished and flexible armor, suggestive of slime and nausea. The mantis among insects is like the python among serpents. Its strange figure, trance-like attitudes, and mysterious ways have in all countries appealed to the imagination of the people. Though sometimes five inches in length, its waist is only about the thickness of its leg. Gaunt, weird, and mysterious in its action, it is as much a wonder among insects as a mastodon would be in a farm-yard. The lady-bird attracts the careless eye as it slowly wanders about, by its brilliant red, spotted with black; but if I were to enter into details of the insect life within the area of a square foot, an entire chapter might be readily filled. But to write upon the natural wonders of the tropics seems nowadays almost superfluous; it is so well understood that in these humid shades the earth seethes with life, that in these undrained recesses the primitive laboratory of nature is located, for disturbing which the unacclimatized will have to pay the bitter penalty of malarial fever.

One hears much about "the silence of the forest," but the tropical forest is not silent to the keen observer. The hum and murmur of hundreds of busy insect tribes make populous the twilight shadows that reign under the primeval growth. I hear the grinding of millions of mandibles, the furious hiss of a tribe just alarmed or about to rush to battle, millions of tiny wings rushing through the nether air, the march of an insect tribe under the leaves, the startling leap of an awakened mantis, the chirp of some eager and garrulous cricket, the buzz of an ant-lion, the roar of a bull-frog. Add to these the crackle of twigs, the fall of leaves, the dropping of nut and berry, the occasional crash of a branch, or the constant creaking and swaying of the forest tops as the strong wind brushes them or the gentle breezes awake them to whispers. Though one were blind and alone in the midst of a real tropical forest, one's sense of hearing would be painfully alive to the fact that an incredible number of minute industries, whose number one could never hope to estimate, were active in the shades. Silence is impossible in a tropical forest.

THE CONGO RIVER.

A. J. WAUTERS.

[The work from which our present selection is made—"Stanley's Emin Pasha Expedition," by A. J. Wauters, chief editor of the "Mouvement Géographique," Brussels—is not, as its name indicates, a record of personal travels of the writer, but a description of Stanley's heroic effort to rescue Emin Pasha from his dangerous situation. We give here some selections descriptive of the great river of Central Africa, which have been preceded by an extract describing the march of Stanley and Emin Pasha from the Nile to Zanzibar.]

THE Congo claims the seventh place among the largest rivers of the world. It is nearly three thousand miles in length. In the volume of its waters it has no rival in the Eastern hemisphere, this being estimated at more than fifty thousand cubic yards a second. In the magnitude of its current it is surpassed only by the Amazon. It rises in the high plateaux of Mouxinga, between three thousand and four thousand feet above the level of the sea, and forms in two different places a series of rapids. Its course through Central Africa is often obstructed by islands, and extending in width from twelve to eighteen miles, describes a vast curve which is twice crossed by the Equator. On either side it receives numerous affluents, and thus drains a river-basin which in its area must be hardly less than half as large as the whole continent of Europe.

Long ago the Congo would have constituted the principal avenue to the interior had it not been that a succession of falls and rapids about one hundred miles from its mouth completely paralyzed all efforts for navigation. These rapids, until recently, have had the effect of making the Congo a sort of *cul-de-sac*, a den of slavers into which European merchants hesitated to venture with any design of forming settlements. When Stanley for the first time reached the western coast on his way from Zanzibar to Nyangwe, a few trade depots were scattered at long intervals along the shores of the lower river, and Boma, about twenty hours' journey from the coast, was the outpost of civilization and commerce; for travellers who should risk any farther advance there was the prospect of dying of hunger and of perishing in unknown districts where barbarism reigned supreme. This was ten years ago!

Such a discovery as Stanley's could not fail to awaken the keenest interest. Here was revealed to the eyes of Europe a vast region in the heart of Africa, rich, fertile,

and densely populated, and permeated by a colossal river-way, the mouth of which presented the exceptional advantage of being dominated by no European power. The opportunity for commercial enterprise was too fine to be overlooked, and accordingly, under the auspices of Leopold, King of the Belgians, a conference was held in Berlin, which resulted in the formation of the "Congo Free State" in the year 1885.

[The cause of the long isolation from civilized man of the great fertile region of the Congo is made very clear by our author in his description of the insuperable hinderances to navigation.]

Parallel to the coast of Africa, and at no great distance from it, there lies a range of low mountains formed on the edge of the plateaux, the uniformity of which is broken at intervals by some isolated peaks. Across this coast-chain the waters collected in the central plains have hollowed out for themselves channels along which they escape towards the sea, and these channels are shut in by rocky cliffs between which the streams roll on with an impetuous rush.

Of these watercourses none is so noted, nor at the same time so wild and romantic, as that along which pours the enormous volume of the waters of the Congo. Between Matadi and Leopoldville the stream is interrupted by no less than thirty-two falls or rapids, every one of which presents a spectacle of real magnificence.

Imagination may well conceive of the river-bed as a gigantic staircase, some two hundred miles in length, descending from an altitude of eight hundred feet, and divided by thirty-two steps all differing in width and height; it is enclosed on either hand by rocky banks, and ever and again obstructed by dark projecting reefs and blocks of stone of every size and shape. Such is the Cyclopean channel along which rushes the Congo. It is

the monarch of the Old-World rivers, here in its infant course spreading out into an expanse of water some two thousand or three thousand yards wide, and here again contracting itself to a breadth of three hundred yards, but continuously gaining in its depth and velocity what it loses in its superficial extent. At every angle of the channel through which it rolls it seems to assume a different character; in one place it appears to be possessed with a furious rage that is indomitable, as it precipitates itself into an amphitheatre of rocks where the waters whirl in tumultuous eddies and dashing themselves against the granite crags are mingled in terrific chaos; at another place, after having continued its wild carcer for some miles (as at the rapids of Nsongo and Lumba), the foaming billows of the river gradually subside and are lulled to rest, till they spread themselves out in the tranquillity of a placid lake.

The calm, however, is all a delusion; soon again the still waters are animated with redoubled fury; once more they dash forward with increased velocity, and finding a yet steeper slope, they hurl themselves into another of the romantic gorges, where they renew their ebullitions with an awful roar.

On either side of the river, as thus it tears along its impetuous course, are lines of hills, often rising into peaks with bare summits, broken either by sloping valleys or by deep ravines, the sides of which are clothed with tall rank grass, except in parts where they are marshy, or covered with dense forests.

Such is the region of the Falls; such is the giant barrier which Nature has erected almost adjacent to the mouth of the Congo, as though she desired to throw every impediment she could in the way of access to these regions of Africa, and to do her utmost to provide a bulwark to defend

the wealth of the interior. For three centuries every effort of the intruder has been baffled; the barrier has been effectual to rebuff every expedition that has been taken in hand, and has defied each successive attempt to penetrate the secrets of the mysterious land.

[While navigation is thus rendered impossible, land travel is very difficult to perform.]

The caravan road is a mere footpath, rarely more than thirty inches wide, winding through a stifling labyrinth of grass several yards high. Long and toilsome ascents under the glare of the African sun are succeeded by descents equally wearisome leading to the marshes in the hollow of the deep ravines. At intervals along the slopes there are extensive groves of palm-trees or bananas, baobabs also being not uncommon. On the lower ground the way proceeds through fine forests, thick with trees of various species, connected one with another by wreaths of creepers that form verdant arches overhead, and are the resort of the widow-bird, with its black plumage and long tail, as well as of countless smaller birds resembling bengalis, which rise in swarms as their solitude is disturbed. Only in single file is it possible for any caravan to make advance.

Across the Luvu River the agents of the Free State have formed a suspension-bridge of iron rods attached to baobabs on either bank, a structure of which white men and Zanzibaris avail themselves, but so frail that the natives, as a rule, hesitate to trust their feet upon it, as it oscillates so suspiciously under their weight.

Beyond Palaballa the country is almost reduced to the condition of a desert, mainly in consequence of the withdrawal of the natives from the neighborhood of the caravan routes. This they have done not from any fear of the white man, whom they are disposed to trust entirely, but

STREET IN MATADI, THE PROBABLE FUTURE METROPOLIS OF WEST AFRICA AND THE CONGO COUNTRY

(FROM A VIEW BY W. S. CHERRY)

through the depredations of the negro porters, who have no sense of any rights of property save the rights of the strongest. With the recent increase of the caravan traffic between Matadi and Leopoldville the damage done to the plantations adjacent to the line of route became more and more intolerable; while in addition to this, the soldiers, Haoussa, Zanzibari, or Bangala, who were engaged for escort, would perpetually commit outrages which the European was powerless to repress. The natives, therefore, recognized the expediency of retiring farther off; they removed their huts, and re-erected them at such a distance from the line of thoroughfare as they concluded would render their homesteads safe from the attacks of such marauders.

It followed, as a consequence of this migration, that on entering the district Stanley's seven hundred and fifty men had nothing to depend on from the products of the place. They found themselves without the opportunity of providing their requisite supplies, because there were no longer any of the accustomed markets to which the inhabitants of the villages within reach of the route had hitherto been sending the produce of their fields, their hunting-grounds, and their fisheries. Even in the interior of the country when the report was circulated that the notorious Boula Matari was advancing with one thousand men, all armed with guns, the alarm was so great that for a week the ordinary market-places were quite deserted.

Very notable are these markets as demonstrating the commercial capabilities of the natives, which are quite surprising. A visit to one of them, that of Kuzo-Kienzi, is described by Captain Thys. "Here," he says, "is a gathering of between two hundred and three hundred salespeople of both sexes, with their variety of goods displayed either in baskets or spread out on banana-leaves,

a throng of purchasers meanwhile moving to and fro and inspecting the commodities. The women, who are more numerous than the men, squat down in front of their goods and exhibit a peculiar aptitude for their occupation; they solicit the attention of the passer-by, they eulogize the quality of what they offer to sell, they exclaim indignantly when a price is tendered below the proper value, and with insinuating smile beguile their customers to make a purchase. The sale of vegetables is entirely committed to the women.

"The enumeration of the articles exhibited for sale comprises a long list. At Kuzo-Kienzi I have myself seen goats, pigs, fowls, fish (both fresh and smoke-dried), hippopotamus-meat and hides, rows of spitted rats, locusts, shrimps, sweet potatoes, maize, haricot beans, green peas, yams, bananas, earth-nuts, eggs, manioc (cooked as well as raw), manioc-bread, made up both into rolls and long loaves, pineapples, sugar-cane, palm-nuts, tobacco-leaves in considerable quantity, palm-wine supplied either in jars procured from the coast or in their own native calabashes, cabbages, sorrel, spinach, pimento, and punnets of mixed salad arranged very much as in our European market-gardens. In addition to these I noticed a few small lots of ivory, strong ropes of native manufacture, mats, European stuffs in considerable variety, powder, glass, pottery, beads,—in short, almost every conceivable kind of ware.

"Avenues run through the market-place, which is divided into sections each appropriated to its own kind of merchandise; in one place is the ivory-mart, in another the tobacco-mart, by far the greater allotments being assigned to the vegetable department.

"There are three kinds of currency in use,—the handkerchief, the mitaku, which is brass wire, and the blue bead known as *mata-e*. A class of men who may be

described as a sort of money-changers have their own proper quarters, effecting such exchanges as the business of the market may require.

"As an ordinary rule traffic would commence about ten in the morning and be continued till nearly four in the afternoon; and the close of the market I must reluctantly report is characterized by those scenes of disorder which not unfrequently are witnessed in the like circumstances at home. Immoderate drinking as ever provokes angry disputes, the intoxicating palm-wine being here the substitute for beer and gin."

A pleasing exception is the Lukunga to the general aspect of the Congo-banks in the region of the Falls. Its valley is fertile, and the soil well adapted to the cultivation of any kind of tropical produce, so that attempts have been already made to promote the growth of mountain-rice, coffee, eucalyptus, and other crops.

Stretched across the landscape on the far side of the Lukunga lies the Ndunga range, the loftiest in the entire district, from the middle of which, rearing itself some eight hundred feet above the surrounding eminences, is a quartzose projection, known as Mount Bidi. The summit of this commands an extensive view. At the base of the mountain, between the Congo on the north and the village of Lutete on the east, are valleys rich in vegetation and abounding in plantations, from which the requirements of many villages are supplied. Farther off is a succession of extensive plains, on which dark-green tracts indicate the position of other villages nestling in the shelter of their venerable *safos*. It is here at the Lukunga that the second portion of the Falls district is reached. . . .

A glance at the map at once makes it evident that the Congo, before making its way to the wild ravines of the Falls, opens out into a large expanse of about nine square

miles, approaching to the circular in form, on which Stanley has bestowed his own name, designating it "Stanley Pool."

In all the narratives of the Congo exploration no name is of more frequent occurrence than that of this important lake; no place has been more repeatedly the subject of dispute, as none can have a greater political significance, whilst nowhere has the progress of European occupation been more rapid. Stanley Pool, in fact, is the common port of all the navigable highways above it; it is the terminus of what is one of the finest net-works of rivers in the world, offering for the development of steam navigation a course which in various directions has been surveyed for over eight thousand miles.

Hence steamers can have access to not a few of the most fertile and populous regions of Central Africa. To Stanley Falls and the Aruwimi the route lies along the Congo itself; by the Kasai and Sankullu the way is open to the territory of the Bashilangé and the Baluba; by the Chuapa to the heart of the Balolo country; by the Lomami to the confines of Nyangwe and Urua; and by the Mobangi-Welle to the land of the Niam-niam. . . .

"There are few more charming sights," Captain Thys has written, "than that enjoyed after a tedious and toilsome march of seventeen days through the region of the Falls, when, on attaining the height of Leopoldville, the wide panorama mirrored in Stanley Pool bursts upon the view. The lake lies expanded as an inland sea, and is enclosed by wooded hills of which the outline becomes indistinct in the blue perspective. First, turning to the far extremity of the wide-spread water, the eye rests upon the island of Bamu, looking like an elongation of the Kalina point; the landscape beyond is bounded by the heights on the French shore, which are clothed with verdure, and

which are in close proximity to some rugged white rocks to which Stanley, on account of some resemblance which he traced, gave the name of "Dover Cliffs." On the north shore, the French settlement of Brazzaville comes clearly in view, as well as the stores of the firm of Daumas, Béraud & Co. at Mfua. The opposite bank is lower but equally wooded, and nestling among surrounding plantations can be described the houses of Kinchassa, the Kintamo village, whose chief, Ngaliema, plays so important a part in the story of the foundation of the Free State. Nearest of all, close at our feet, are the buildings of Leopoldville." . . .

Of all [the settlements on Stanley Pool], Leopoldville is considerably the most important. On the slope of a hill a kind of terrace has been formed, where, amidst bananas, mangoes, papaws, palms, and other fruiting trees, stand two lines of dwelling-houses, with their accessory stores and other erections. The hill-sides and the valleys have all been put under cultivation,—fine plantations of manioc, maize, rice, haricots, sweet potatoes, coffee, and cocoa covering an area of somewhere about seventy acres. As to vegetables, no European garden could make a much finer or more varied display,—peas, cabbages, lettuces, onions, leeks, radishes, carrots, all flourish. A little way apart are the enclosures for goats and for donkeys, shelters for larger cattle being in course of construction. Beyond these are clusters of huts of all shapes and dimensions, the homes of the natives and the barracks of the Haoussa and Bangala soldiers; whilst, finally, down by the water's side, there are the carpenters', blacksmiths', and engineers' work-sheds, in which steamers are built and repaired with a bustle and activity that would not discredit any European dock-yard.

Regularly every morning as the day dawns, the bell

sounds and the negro trumpeter blows his matutinal reveille. The whole settlement awakes, and both terraces and huts are at once full of animation: groups of laborers hasten to the plantations; the goods in the storehouses, delivered the day before, are unpacked; at the forges the sturdy negroes, half naked, wield their ponderous hammers; meanwhile, at the military quarters, the cannibal Bangala are being drilled by European officers, and trained in the use of breech-loaders.

It only bides the time for the railway to be opened with Stanley Pool for its terminus, and a brilliant future must be before the land: the arrival of the first locomotive will be greeted with unbounded enthusiasm. Not the least occasion is there to fear that the natives, like the Chinese some years ago, will proceed to throw rails and engine into the water; the period of their initiation into the arts of civilization has hitherto been brief, but they have already outlived the fabulous age of the dragon with the rabbit's eyes.

[We shall end these selections by a brief description of the Upper Congo.]

Altogether unique is the navigable highway which the Congo forms between Stanley Pool and Stanley Falls. The distance between these two points is over one thousand miles, or something less than the united length of the Rhine and the Rhone. Its width is nowhere less than four hundred yards, and in many parts extends to several miles; between the points of confluence of the Mongalla and the Itumbiri it is over twenty miles, about the width of the Straits of Dover, and unapproached in magnitude by any other watercourse in the world.

From the district of Bolobo, until it has passed the point of confluence with the Aruwimi, its course is studded with innumerable islands, and a navigator has not unfrequently

the simultaneous choice of ten or more different channels, each in itself a river some hundreds of yards in breadth, and separated by islands that vary from three miles to thirty miles in length. From the entire absence of any external indications, these channels at present require very watchful navigation, and in some parts present a certain amount of danger; but there can be little doubt that when the forthcoming survey has been completed, at least one channel will be proved to exist that is perfectly adapted for rapid navigation, and available to steamers of considerable size.

All the islands appear heavily clothed with vegetation which is reflected in the waters around; palm-trees of five or six species, tamarisks, cotton-trees, acacias, calamus, cola-trees, and gigantic baobabs grow in profusion; and the ubiquitous caoutchouc creeper, with its white blossoms, of which the natives have not yet learnt the value, casts its interlacing growth over the massy forest, as if to throw an impenetrable barrier in the way of any curious intruder.

Any one navigating these narrow channels, with their bordering of flowers and verdure, might almost imagine himself on the ornamental waters of some familiar and cultivated domain. The scene is quite restful to the eye, after the imposing if somewhat monotonous panorama which the river presents when the view stretches afar across the woods and savannas on its shores.

The banks beyond Chumbiri are for the most part low, being only broken by a few hills at Upoto. Everywhere the soil seems wonderfully fertile, and is clothed with a dense vegetation which is frequently enlivened by the more brilliant green of the banana plantations that surround the villages, and by the aid of a telescope may often be made out miles away over the plains beyond the swampy shores of the river

The population is very irregularly distributed, some large tracts being apparently quite deserted, whilst in others an almost uninterrupted line of villages extends away for miles. Generally friendly, the people not unfrequently are quite hospitable. They come in considerable numbers in their canoes to greet a passing boat, signalling to travellers that they should stop and trade with them, and always showing themselves eager for business transactions.

THE LAND OF THE MOON.

RICHARD F. BURTON.

[Captain Burton, an English traveller, born about 1821, whose numerous works describe journeys in Arabia, South America, Iceland, and Africa, owes his particular distinction in the latter country to his discovery of the great Lake Tanganyika. At the period of his expedition, which left Zanzibar in 1857, nothing was known of the interior in this region, except from reports of Arab traders. The country of Unyamwezi, the Land of the Moon, was believed to be inhabited by fierce and barbarous tribes, but Burton determined to cross it, in search of the "Sea of Ujiji, or Unyamwezi Lake." He was accompanied in this expedition by Captain Speke, the discoverer of Lake Victoria Nyanza. The ascent of the mountain ranges bordering the interior proved a difficult matter. The final episode in this part of his journey is thus described by the traveller:]

THE great labor still remained. Trembling with ague, with swimming heads, ears deafened by weakness, and limbs that would hardly support us, we contemplated with a dogged despair the apparently perpendicular path that ignored a zigzag, and the ladders of root and boulder, hemmed in with tangled vegetation, up which we and our starving, drooping asses were about to toil. On the 10th of September we hardened our hearts, and began to breast

the Pass Terrible. My companion was so weak that he required the aid of two or three supporters; I, much less unnerved, managed with one. After rounding in two places wall-like sheets of rock—at their bases green grass and fresh water were standing close to camp, and yet no one had driven the donkeys to feed—and crossing a bushy jungly step, we faced a long steep of loose white soil and rolling stones, up which we could see the Wanyamwezi porters swarming, more like baboons scaling a precipice than human beings, and the asses falling after every few yards.

As we moved slowly and painfully forward, compelled to lie down by cough, thirst, and fatigue, the *sayhah* or war-cry rang loud from hill to hill, and Indian files of archers and spearmen streamed like lines of black ants in all directions down the paths. The predatory Wahumba, awaiting the caravan's departure, had seized the opportunity of driving the cattle and plundering the villages of Inenge. Two passing parties of men, armed to the teeth, gave us this information; whereupon the negro "Jelai" proposed, fear-maddened, a *sauve qui peut*,—leaving to their fate his employers, who, bearing the mark of Abel in this land of Cain, were ever held to be the head and front of all offence. Khudabakhsh, the brave of braves, being attacked by a slight fever, lay down, declaring himself unable to proceed, moaned like a bereaved mother, and cried for drink like a sick girl. The rest of the Baloch, headed by the jemadar, were in the rear; they levelled their matchlocks at one of the armed parties as it approached them, and, but for the interference of Kidogo, blood would have been shed.

By resting after every few yards, and by clinging to our supporters, we reached, after about six hours, the summit of the Pass Terrible, and there we sat down among the

aromatic flowers and bright shrubs—the gift of mountain dews—to recover strength and breath. My companion could hardly return an answer; he had advanced mechanically and almost in a state of coma. The view from the summit appeared eminently suggestive, perhaps unusually so, because disclosing a retrospect of severe hardships, now past and gone. Below the foreground of giant fractures, huge rocks, and detached boulders, emerging from a shaggy growth of mountain vegetation, with forest glens and hanging woods, black with shade gathering in the steeper folds, appeared, distant yet near, the tawny basin of Inenge, dotted with large square villages, streaked with lines of tender green, that denoted the watercourses, mottled by the shadows of flying clouds, and patched with black where the grass had been freshly fired. A glowing sun gilded the canopy of dense smoke which curtained the nearer plain, and in the background the hazy atmosphere painted with its azure the broken wall of hill which we had traversed on the previous day.

Somewhat revived by the *tramontana* which rolled like an ice-brook down the Pass, we advanced over an easy step of rolling ground, decked with cactus and the flat-topped mimosa, with green grass and bright shrubs, to a small and dirty camp, in a hollow flanked by heights, upon which several settlements appeared. At this place, called the "Great Rubeho," in distinction from its western neighbor, I was compelled to halt. . . .

On the 14th of September, our tempers being sensibly cooled by the weather, we left the hill-top and broke ground upon the counter-slope or landward descent of the Usagara Mountains. Following a narrow footpath that wound along the hill-flanks, on red earth growing thick clumps of cactus and feathery mimosa, after forty-five minutes' march we found a kraal in a swampy green gap,

bisected by a sluggish rivulet that irrigated scanty fields of grain, gourds, and watermelons, the property of distant villagers. For the first time since many days I had strength enough to muster the porters and to inspect their loads. The outfit, which was expected to last a year, had been half exhausted in three months. I summoned Said bin Salim, and passed on to him my anxiety. Like a veritable Arab, he declared, without the least emotion, that we had enough to reach Unyanyembe, where we certainly should be joined by the escort of twenty-two porters. "But how do you know that?" I inquired. "Allah is all-knowing," replied Said; "but the caravan *will* come." Such fatalism is infectious. I ceased to think upon the subject.

On the 15th, after sending forward the luggage, and waiting as agreed upon for the return of the porters to carry my companion, I set out about noon, through hot sunshine tempered by the cool hill-breeze. Emerging from the grassy hollow, the path skirted a well-wooded hill and traversed a small savanna, overgrown with stunted straw and hedged in by a bushy forest. At this point massive trees, here single, there in holts and clumps, foliaged more gloomily than church-yard yews, and studded with delicate pink flowers, rose from the tawny sunburned expanse around, and defended from the fiery glare braky rings of emerald shrubbery, sharply defined as if by the forester's hand. The savanna extended to the edge of a step, which, falling deep and steep, suddenly disclosed to view, below and far beyond the shaggy ribs and the dark ravines and folds of the foreground, the plateau of Ugogo and its eastern desert.

The spectacle was truly impressive. The vault above seemed "an ample æther," raised by its exceeding transparency higher than it is wont to be. Up to the curved rim of the western horizon lay, burnished by the rays of

a burning sun, plains rippled like a yellow sea by the wavy reek of the dancing air, broken towards the north by a few detached cones rising island-like from the surface, and zebraed with long black lines, where bush and scrub and strip of thorn jungle, supplanted upon the watercourses, trending in mazy net-work southward to the Rwaha River, the scorched grass and withered cane-stubbles, which seemed to be the staple growth of the land. There was nothing of effeminate or luxuriant beauty, nothing of the flush and fulness characterizing tropical nature, in this first aspect of Ugogo. It appeared, what it is, stern and wild, —the rough nurse of rugged men,—and perhaps the anticipation of dangers and difficulties ever present to the minds of those preparing to endure the waywardness of its children contributed not a little to the fascination of the scene.

[The table-land of interior Africa being reached, and the territory of Ugogo traversed, the adventurers crossed the borders of Unyamwezi, the "Land of the Moon."]

There is the evidence of barbarous tradition for a belief in the existence of Unyamwezi as a great empire united under a single despot. The elders declare that their patriarchal ancestor became after death the first tree, and afforded shade to his children and descendants. According to the Arabs, the people still perform pilgrimage to a holy tree, and believe that the penalty of sacrilege in cutting off a twig would be visited by sudden and mysterious death. All agree in relating that during the olden time Unyamwezi was united under a single sovereign, whose tribe was the Wakalaganza, still inhabiting the western district, Usagozi. According to the people, whose greatest chronical measure is a *masika*, or rainy season, in the days of the grandfathers of their grandfathers the last of the Wanyamwezi emperors died. His children and nobles divided and dismembered

his dominions, further partitions ensued, and finally the old empire fell into the hands of a rabble of petty chiefs. Their wild computation would point to an epoch of one hundred and fifty years ago,—a date by no means improbable.

These glimmerings of light thrown by African tradition illustrate the accounts given by the early Portuguese concerning the extent and the civilization of the Unyamwezi empire. Moreover, African travellers in the seventeenth century concur in asserting that, between two hundred and fifty and three hundred years ago, there was an outpouring of the barbarians from the heart of Æthiopia and from the shores of the Central Lake towards the eastern and southern coasts of the peninsula, a general waving and wandering of tribes, which caused great ethnological and geographical confusion, public demoralization, dismemberment of races, and change, confusion, and corruption of tongues.

The general character of Unyamwezi is rolling ground, intersected with low conical and tabular hills, whose lines ramify in all directions. No mountain is found in the country. The superjacent stratum is clay, overlying the sandstone based upon various granites, which in some places crop out, picturesquely disposed in blocks and boulders, and huge domes and lumpy masses; iron-stone is met with at a depth varying from five to twelve feet, and at Kazeh, the Arab settlement in Unyanyembe, bits of coarse ore were found by digging not more than four feet in a chance spot. During the rains a coat of many-tinted greens conceals the soil; in the dry season the land is gray, lighted up by golden stubbles, and dotted with wind-distorted trees, shallow swamps of emerald grass, and wide sheets of dark mud. Dwarfed stumps and charred "black-jacks" deform the fields, which are sometimes ditched or

hedged in, while a thin forest of parachute-shaped thorns diversifies the waves of rolling land and earth-hills spotted with sunburnt stone. The reclaimed tracts and clearings are divided from one another by strips of primeval jungle varying from two to twelve miles in length. As in most parts of Eastern Africa, the country is dotted with "fairy mounts,"—dwarf mounds, the ancient sites of trees now crumbled to dust, and the débris of insect architecture; they appear to be rich ground, as they are always diligently cultivated. The yield of the soil, according to the Arabs, averages sixty-fold, even in unfavorable seasons.

The Land of the Moon, which is the garden of Central Inter-tropical Africa, presents an aspect of peaceful rural beauty which soothes the eye like a medicine after the red glare of barren Ugogo, and the dark monotonous verdure of the western provinces. The inhabitants are comparatively numerous in the villages, which rise at short intervals above their impervious walls of the lustrous green milk-bush, with its coral-shaped arms, variegating the well-hoed plains; while in the pasture-lands frequent herds of many-colored cattle, plump, round-barrelled, and high-humped, like the Indian breeds, and mingled flocks of goats and sheep dispersed over the landscape, suggest ideas of barbarous comfort and plenty. There are few scenes more soft and soothing than a view of Unyamwezi in the balmy evenings of spring. As the large yellow sun nears the horizon, a deep stillness falls upon earth: even the zephyr seems to lose the power of rustling the lightest leaf. The milky haze of mid-day disappears from the firmament, the flush of departing day mantles the distant features of scenery with a lovely rose-tint, and the twilight is an orange glow that burns like distant horizontal fires, passing upward through an imperceptibly graduated scale of colors—saffron, yellow, tender green, and the lightest

azure—into the dark blue of the infinite space above. The charm of the hour seems to affect even the unimaginative Africans, as they sit in the central spaces of their villages, or, stretched under the forest-trees, gaze upon the glories around.

The rainy monsoon is here ushered in, accompanied, and terminated by storms of thunder and lightning, and occasional hail-falls. The blinding flashes of white, yellow, or rose color play over the firmament uninterruptedly for hours, during which no darkness is visible. In the lighter storms thirty and thirty-five flashes may be counted in a minute: so vivid is the glare that it discloses the finest shades of color, and appears followed by a thick and palpable gloom, such as would hang before a blind man's eyes, while a deafening roar, simultaneously following the flash, seems to travel, as it were, to and fro overhead. Several claps sometimes sound almost at the same moment, and as if coming from different directions. The same storm will, after the most violent of its discharges, pass over, and be immediately followed by a second, showing the superabundance of electricity in the atmosphere.

Travellers from Unyamwezi homeward returned often represent that country to be the healthiest in Eastern and Central Africa: they quote, as a proof, the keenness of their appetites, and the quantity of food which they consume. The older residents, however, modify their opinions: they declare that digestion does not wait upon appetite; and that, as in Egypt, Mazanderan, Malabar, and other hot-damp countries, no man long retains rude health. The sequelæ of their maladies are always severe; few care to use remedies, deeming them inefficacious against morbific influences to them unknown; convalescence is protracted, painful, and uncertain, and at length they are compelled to lead the lives of confirmed invalids. The gifts of the

climate, lassitude and indolence, according to them, predispose to corpulence; and the regular warmth induces baldness, and thins the beard, thus assimilating strangers in body as in mind to the aborigines. They are unanimous in quoting a curious effect of climate, which they attribute to a corruption of the "humors and juices of the body." Men who, after a lengthened sojourn in these regions, return to Oman, throw away the surplus provisions brought from the African coast, burn their clothes and bedding, and for the first two or three months eschew society; a peculiar effluvium rendering them, it is said, offensive to the finer olfactories of their compatriots.

The races requiring notice in this region are two, the Wakimbu and the Wanyamwezi.

The Wakimbu, who are immigrants into Unyamwezi, claim a noble origin, and derive themselves from the broad lands running south of Unyanyembe as far westward as K'hokoro. . . . In these regions there are few obstacles to immigrants. They visit the sultan, make a small present, obtain permission to settle, and name the village after their own chief; but the original proprietors still maintain their rights to the soil. The Wakimbu build firmly-stockaded villages, tend cattle, and cultivate sorghum and maize, millet and pulse, cucumbers and watermelons. Apparently they are poor, being generally clad in skins. They barter slaves and ivory in small quantities to the merchants, and some travel to the coast. They are considered treacherous by their neighbors, and Mapokera, the Sultan of Tura, is, according to the Arabs, prone to commit *avanies*. They are known by a number of small lines formed by raising the skin with a needle, and opening it by points laterally between the hair of the temples and the eyebrows. In appearance they are dark and uncomely; their arms are bows and arrows, spears, and knives stuck in the leathern

waist-belt; some wear necklaces of curiously-plaited straw, others a strip of white cow-skin bound around the brow,—a truly savage and African decoration. Their language differs from Kinyamwezi.

The Wanyamwezi tribe, the proprietors of the soil, is the typical race in this portion of Central Africa: its comparative industry and commercial activity have secured to it a superiority over the other kindred races.

The aspect of the Wanyamwezi is alone sufficient to disprove the existence of very elevated lands in this part of the African interior. They are usually of a dark sepia-brown, rarely colored like diluted India ink, as are the Wahiao and slave races to the south, with negroid features markedly less Semitic than the people of the eastern coast. The effluvium from their skins, especially after exercise or excitement, marks their connection with the negro. The hair curls crisply, but it grows to the length of four or five inches before it splits; it is usually twisted into many little ringlets or hanks; it hangs down like a fringe to the neck, and is combed off the forehead after the manner of the ancient Egyptians and the modern Hottentots.

There are but few ceremonies among the Wanyamwezi. A woman about to become a mother retires from the hut to the jungle, and after a few hours returns with a child wrapped in goat-skin upon her back, and probably carrying a load of firewood on her head. The medical treatment of the Arabs with salt and various astringents for forty days is here unknown. Twins are not common as among the Kafir race, and one of the two is invariably put to death; the universal custom among these tribes is for the mother to wrap a gourd or calabash in skins, to place it to sleep with, and to feed it like, the survivor.

If the wife die without issue, the widower claims from her parents the sum paid to them upon marriage; if she leave

a child, the property is preserved for it. When the father can afford it, a birth is celebrated by copious libations of pombe. Children are suckled till the end of the second year. Their only education is in the use of the bow and arrow; after the fourth summer the boy begins to learn archery with diminutive weapons, which are gradually increased in strength. Names are given without ceremony, and, as in the countries to the eastward, many of the heathens have been called after their Arab visitors.

The children in Unyamwezi generally are the property not of the uncle but of the father, who can sell or slay them without blame; in Usukuma or the northern lands, however, succession and inheritance are claimed by the nephews or sisters' sons. The Wanyamwezi have adopted the curious practice of leaving property to their illegitimate children by slave-girls or concubines, to the exclusion of their issue by wives; they justify it by the fact of the former requiring their assistance more than the latter, who have friends and relatives to aid them. As soon as the boy can walk he tends the flocks; after the age of ten he drives the cattle to pasture, and, considering himself independent of his father, he plants a tobacco-plot and aspires to build a hut for himself. There is not a boy "which cannot earn his own meat." . . .

The habitations of the Eastern Wanyamwezi are the *tembe*, which in the west give way to the circular African hut; among the poorer subtribes the dwelling is a mere stack of straw. The best tembe have large projecting eaves supported by uprights: cleanliness, however, can never be expected in them. Having no limestone, the people ornament the inner and outer walls with long lines of ovals formed by pressure of the finger-tips, after dipping them in ashes and water for whitewash, and into red clay or black mud for variety of color. With this primitive

material they sometimes attempt rude imitations of nature,—human beings and serpents. In some parts the cross appears, but the people apparently ignore it as a symbol. Rude carving is also attempted upon the massive posts at the entrances of villages, but the figures, though to appearance idolatrous, are never worshipped.

ANIMALS AND PEOPLE OF CENTRAL AFRICA.

HERMANN VON WISSMANN.

[Between the years 1880 and 1887, Major Von Wissmann, an adventurous German traveller, made three expeditions to Equatorial Africa, materially increasing our knowledge of the country and its people by his varied and intelligent observations, as well as throwing fresh light on the methods pursued by the Arab slave-hunters. From his work entitled "My Second Journey through Equatorial Africa, from the Congo to the Zambesi, in the Years 1886 and 1887," the following selections are made, being desultory extracts from its pages. In the journey here described he entered at the mouth of the Congo, followed the course of that river to the vicinity of Lake Tanganyika, passed southward down that lake and Lake Nyassa and the river Shire to the Zambesi, which he pursued to its mouth. We begin our selections by an account of animal life on the Congo.]

ARRIVED at Quamouth, at the mouth of the Cassai, we learned that the "Peace" was not due for a week, and we therefore decided to go on a hunting expedition to a district on the Upper Congo, near the mouth of the Lefini, where game is plentiful. The first moonlight night a herd of elephants was seen wading through the stream above the camp. The huge beasts felt so secure that they had given themselves up to the enjoyment of bathing to their hearts' content. They were playfully racing through the

shallow water, chasing each other in their delight, uttering shrieks such as I had never heard before. I crept to the edge of the wood near the bank, but was stopped by a lagoon which emptied itself there. I then rowed up the river in a canoe, making a large curve round the animals; and afterwards drifting up to them, I kept my gun ready to fire. The elephants marked their sense of my nearness by a suspicious snorting, whilst one of them cautiously drove the whole herd out of the water into a thicket. Now the gigantic beasts broke away towards the primeval forest close up to the camp-fires, when, frightened by the glare of the latter, they disappeared into the impenetrable thicket, whither to follow them would have been useless.

In spite of the numbers of elephants, buffaloes, and wild boars, I did not once get the chance of a shot, as it was impossible to creep along either in the primeval forest or in the long grass of the savannas. I therefore returned without prey to Quamouth, where the "Peace" arrived on March 20 to take me up the Cassai. . . .

Being amply provided with fuel, we steamed on until dusk [on March 22], and soon dropped anchor off an island covered with high grass. After dark the island, a pasture-ground for hippopotami, was soon alive with them. I took a short moonlight walk with Herr von Nimptsch, and, disturbing them at their supper, we made these pachydermata scamper heavily away to their place of refuge. Only one of them seemed unwilling to be disturbed; he was standing in the deep grass, and warned us off by snorting rapidly. We tried to make him go on by throwing hard clods of earth at him, but as we did not succeed in moving him, we decided upon retreating and leaving the irritated animal undisturbed.

Next day we passed into an almost inextricable net of channels separated by long-stretching grass-grown islands

and banks. The right bank, as we were told, is inhabited by the Wabuma, the left by the Wanfumu, although the existence of *homo sapiens* could scarcely be credited in the midst of this vast waste of water; nor have I anywhere else got the impression of so undisturbed a desert as in these parts. In this place it was that I with my attendants shot seven elephants and several hippopotami, so that our canoes could scarcely carry the meat which our men were supplied with for several months.

We could almost fancy we were transplanted into an antediluvian period. Fearless, as if man, the most dangerous beast of prey, were unknown in these regions, the huge pachydermata were moving about, while, as a rule, they only leave their protecting waters and the shadow of the primeval forest at night. Hippopotami were lying basking in the hot sun; elephants were marching along the river-side singly and in herds, occasionally bathing in the shallow places of the river, with buffaloes calmly walking among them. We also noticed an abundance of all sorts of birds,—pelicans quietly waiting for their prey, flocks of different kinds of wild ducks which the lagoons were stocked with, beautiful black geese almost resembling swans, and the so-called spur-goose. On some dry branches on the bank were perched lurking cormorants and splendidly-dyed kingfishers; the river eagle was seen proudly soaring along the bank; while white-headed vultures were perching on naked branches, and thousands of lesser birds, such as strand-runners, rails, and fish-hawks, were haunting the place. Different kinds of storks were gravely and solemnly stalking across the flooded islands, and on the bank the large heron was visible in the shade of some overhanging branches.

Apparently undisturbed peace is reigning everywhere among those thousands of different creatures, all enticed

by the mighty stream, with its cooling floods and its abundance of animal life. Now and again the deep-toned voice of the *behemoth* makes the peaceful stillness resound, involuntarily causing one to start. Here one has to get accustomed to sounds that try one's nerves most painfully by their loudness and strangeness. That reminds me of the above-named elephant-hunt in the same neighborhood. We had killed only female animals and young ones, and were surprised not to have found one male among the lot, when in the dead of night the huge creatures came in search of their families. They stopped close to the camp, where the flesh of their mates was being dried by the bright fires. The scent of the blood must have convinced them of the loss they had sustained, for they raised a wailing sound so deep, so strange and mournful, that I was startled from my sleep and deeply touched with the singularly impressive tones. . . .

The primeval forest was everywhere enlivened by numerous parrots and hosts of monkeys, but directly after sunset the deep silence of the desert prevails, which, as a European, you will never experience on your native continent. Be it imagination, be it excitement of the nerves, the slightest sound which at night interrupts the deep quiet seems to startle you. The piercing shrieks of the nocturnal monkey, the splashing of a fish pursued by a crocodile, or the deep thundering of the hippopotamus, causes the auricular nerves to be constantly on the alert.

[The condition of undisturbed freedom and peace of animal life here described, which has doubtless continued for untold centuries, is nearing its end. The white man, with his rifle, is invading the primeval scene like a fatal pestilence, and death by violence will reap a plentiful harvest there in the years to come. Having described the animal life on the Cassai, some account of its human inhabitants will be in order.]

The Lebue forms the boundary between the Bangodi and the numerous tribe of the Badinga. The latter are the most dexterous river navigators I know; a full-manned canoe, in which twelve men, standing behind each other, were handling oars of two metres' length, managed to keep up with the "Peace" [a steam vessel]. Such a full-manned canoe is a beautiful sight, with the stalwart, muscular, dark-brown figures smoothly swinging their oars up and down so as to keep the plumes on their heads in wild motion. Resting one foot on the edge of the vessel, they made the slender canoe glide rapidly along the yellow water, singing in rough tones to the vigorous strokes of their oars. The Badinga always strike me as having particularly muscular thighs and calves. Their gait appears heavy, probably from their almost living in canoes. They have their plantations on islands, or close to the river; the palms that furnish them with wine likewise grow near the water, and on their fishing expeditions they have to make use of a canoe.

The every-day life of the Badinga requires, on the whole, very little exercise besides rowing. In the morning the men, after having basked in the first rays of the sun, will inspect their weir-baskets, collect into their calabashes the wine that during the night has been gathering in the palms, and perhaps visit a neighboring village on the river-side. Then they return home and partake of the meal cooked by their wives, consisting of manioc porridge and roasted sweet potatoes, with dried fish, after which they give themselves up to the enjoyment of their palm wine.

Thus, in districts where the palm grows plentifully, you will often find the male part of the population in a state of intoxication. For this reason, therefore, it is not advisable to visit such countries in the afternoon, for the negro, when intoxicated, is easily inclined to quarrel; he will at

such times even lose the timidity habitual to him; while, if you arrive in the morning, the people have not had time to get into their daily fit of drunkenness, and have enough to do in discussing the wonderful stranger and in preparing their sales. You will very seldom find tipsy women; they have too much work to do to be able to enjoy their wine undisturbed, as they have to manage the whole farm. Then they have the meals to cook for their lords and masters, to get the fish ready for drying, to keep their cottages clean, —which is mostly done with the utmost neatness,—and to perform those general duties which also fall to the share of our wives and mothers, though there is not much required of a mother here, the baby negroes being literally left to self-education.

[Passing up the Sankurru, an important tributary of the Cassai, and from this stream up its tributary the Lomami, our traveller met another interesting tribe, belonging to that race of dwarfs which seems so wide-spread in Africa.

Our way led across undulating prairie, bordered on the left by immeasurable primeval forest, which, as our guides said, extended without interruption to the Lomami. Behind us we could still distinguish the course of the Sankurru by a streak of fog which, as far as the eye could reach, covered the ground like a gigantic snake, stretching from south to north. The deeply indented brooks were bordered by white sandstone; the crystal water was cool and of pleasant taste.

On passing some miserable villages of the lean little Badingo, we found the population to be evidently a mixture of Batua. The Batua are said to live in the large primeval forest, which we were warned not to enter; the roads, which mostly consist of elephant paths, being very much grown over, and leading through many ravines, which are

very difficult to pass. But as I did not want to turn too far to the south towards the route of my former travels, I took a more northerly direction, which led us into dark primeval forests abounding with lianas, where, before coming on some villages, we had to cut roads which were entirely blocked up by felled trees.

Close behind those barricades some natives, painted black and red, and ready with their bows, stopped our passage. As it was of consequence to me to open peaceable intercourse with the timid savages and to acquire guides, I halted before we reached the villages and pitched a camp. The people called themselves Quitundu, also Betundu, and the village was called Backashocko. They belonged to the Batetela, mixed with Bassonge who had fled into the forests. The shape of the huts was like the Batetela's; small stems, rudely shaped to a point, were roughly joined by trellis-work and covered with grass. Hides and stuffs made from bark covered the hips of the Betundu, whose hair, plaited in two or more stiff tails, stood off their heads like horns.

I was greatly pleased to see in the afternoon some Batua of pure quality, real beauties. The people were short, of a brown-yellowish color, or rather light yellow, with a brown shading. They were long-limbed and thin, though not angular, and wore neither ornaments, painting, nor head-dresses. I was chiefly struck with their beautiful and clear eyes, lighter than those of the Batetela, and their delicate rosy lips, by no means pouting like those of the negro. The demeanor of our new friends, whom I treated with particular kindness, was not savage like that of the Batetela, but rather timidly modest, I may say maidenly shy. The little men on the whole reminded me of portraits of the Bushmen of the south of this continent. Their arms consisted of small bows and delicate arrows, which,

before using, they dip into a small calabash filled with poison which they carry fastened in their belts.

By means of great patience and a continual encouraging smile, and by forcing my voice to the most gentle intonation I could manage, I succeeded in communicating with them, and catching some of their idiomatic expressions, which entirely differed from those of the other tribes. . . .

For each word the Batua told me I gave them a bead, in giving them which I had to be careful not to touch them, for my coming near them made them start with fear. Bugslag approached them, kindly talking the while, armed with a long pole which he raised behind one of the dwarfs; then he suddenly made his hand glide down until he touched the dwarf's head. As if struck by lightning, the little savage took to his heels; but we succeeded later in taking the measurements of some Batua who came to visit us, all varying from 1.45 to 1.40 metres [from four feet seven inches to four feet nine inches]. I never saw any women among them. The difference between the young and the old men was very striking. While the young people, with their rounded figures, their fresh complexions, and above all their graceful, easy, quiet motions, made an agreeable impression, the old might literally be called painfully ugly. The reason of which seems to be the poor food and the savage and roving life in the primeval forest. In consequence of their extreme leanness, the deeply wrinkled skin of the body assumed the color of parchment. The long limbs were perfectly withered, and the head appeared disproportionately large on account of the thinness of the neck. The people conversed rapidly and with much emphasis; the young greatly respecting the word of the old.

Here, as I had everywhere occasion to observe, the Batua were, on the whole, not so much despised by the Bassonge tribes as by the Baluba; they were very much

feared on account of the poison of their arrows, which was said to be very fatal in its consequences. We were told that the Batua were soon going to kill the powerful chief Zappu Zapp, who had made himself master throughout this neighborhood.

The real home of the Batua is the vast dark primeval forest, which in all seasons yields a variety of fruits,—perhaps only known to and eaten by them,—roots, fungi, or herbs, and especially meat, the latter chiefly of lesser and lower animals, as rats, nocturnal monkeys, bats, a number of rodentia, many of which may be unknown, now and then a wild boar, a monkey, and by chance even an elephant. Other game is not found in the primeval forest, but of smaller animals there is all the more abundance. Caterpillars, cicadas, white ants, and chrysalises also offer an abundant change.

Henceforward we frequently met Batua, without, however, being able to make any observations, the little folk being too much reserved to come forward at all. On the morning of our departure some Batua approached me with a trifling present of manioc roots, and when I smilingly refused it, they pursued me, imploring me to accept it; upon my granting their wish they went away contented. On the previous day I had given these Batua some small presents in the hope of augmenting my stock of words; they evidently acted in this way under the impression that my presents, if they did not return them, would give me some power over them. Such mistrust is quite a mark of the genuine savage.

The deep quiet of the primeval forest, which continually put obstacles in our way, thus causing much work and trouble, was scarcely interrupted by the note of a bird. I rarely remember to have heard the piercing cry of the helmet-bird of an evening, or the noise produced by the

rustling wings of the rhinoceros-bird. Only the white ants were incessantly making a rustling sound at their work. Any attempt at astronomical work had to be abandoned under this never-opening leafy roof.

[We shall conclude with a description of the habits of some tribes in the vicinity of Lake Nyassa.]

The Wakonde burn their corpses three days after death, life having then without any doubt fled from the body; the ashes are collected into small jars and preserved by the family. These tribes often also dissect their dead, especially if the reason for death is not quite clear. They open the stomach with a piece of palm bark, and examine its walls and contents.

The Wawemba bury their dead, but in the course of three days they open the grave, take out the corpse, and completely dissect it; they cut the flesh off the bones, and after having anointed the latter with oil they scatter them in the savanna.

A kind of ordeal, such as I have found to be extensively practised in Inner Angola, is frequently used here for settling disputes. If any offence is to be investigated, all the persons in question are assembled in a circle. The chief takes up a wooden instrument exactly resembling the toy known among our children as a "Soldatenschere." While repeating the nature of the offence, this "Soldatenschere" makes its apparently automatic movements, then suddenly folding up hits the breast of the offender.

In order to search for stolen objects they make use of a board with a handle at each end. Two persons suspected of theft are compelled to take hold of the handle crosswise, and are led by the judge to the place where the stolen article is supposed to be hid. The two, in a bent attitude, are made to move the board close along the ground or the

wall of the hut. The evil conscience of one of the two is noticed by the other in his movement when approaching the hidden object, and in order to be released from suspicion the former calls the judge's attention to this circumstance.

In accordance with the habit in West Africa, it is customary among these tribes to settle a dispute between two persons by drinking a poisonous draught. There is a certain poisonous bark which, boiled in water and millet beer, rarely causes death, but either instant vomiting or violent swelling of the stomach and great pain. The two persons in question have to drink of this beverage, and the one who vomits is cleared of the suspicion.

The succession to the dignity of chief does not pass to the sons of the chief, but to his eldest sister's eldest son. If this is not possible, a new chief is elected. They assemble and hold a grand banquet, at which much millet beer is drunk, and discuss who is to be elected. As soon as the greater number of the drinkers are agreed, the whole assembly throw themselves on the one selected, seize and bind him, and take him into the common hut, where he is released from his fetters and proclaimed chief. If he shows himself at all timid at this sudden and startling attack, or attempts to flee, they agree upon some one else.

The greatest festival of the year, which here as with us consists of twelve months, is the festival of the new fire. Throughout the country the fires are extinguished on the eve of the holiday and the ashes carried to a heap outside the village. Then a great carousing commences, and as soon as the moon has attained a certain height the chief begins to make a new fire for the coming year. Into a small square board of soft dry wood, which in the centre has a little funnel-shaped opening, a span-long peg of wood pointed at the end is inserted and twirled round by the chief until the soft wood begins to glow. The first spark

is kindled by vigorous blowing, and taken up with pieces of tinder by the wives of the chiefs, who in their turn distribute them to the women pressing around. This fire has to last for the next twelve months.

Polygamy rarely occurs among the tribes I have mentioned; only rich people indulge in the luxury of a harem, the number of women in which never exceeds three. When a girl has developed into a woman, she is put into a state of intoxication by strong drinks, painted white and red, and laid before the parental hut, so as to show the villagers and fellow-tribesmen that they may now woo the beauty. A suitor first makes himself known to the girl's mother, and in the evening now and again throws small presents for her parents into their house. If they are thrown out again, the suitor is dismissed; if accepted, he has to continue them until the father and mother declare themselves satisfied and consent to the wooer fetching their daughter. If the woman objects, all the presents or their worth have to be returned; if she consents, she is, with the assistance of other young villagers, taken by force from her parents' hut at night, and, according to custom, she is brought, screaming and struggling, into the hut of her lover, where the whole village assembles, singing and drinking.

DISCOVERY OF LAKE TANGANYIKA.

RICHARD F. BURTON.

[In a previous paper some incidents of Captain Burton's journey inland from the coast of Zanzibar were given, with his description of the inhabitants of the "Land of the Moon." In the present one is recorded his discovery of the great inland lake of south-central Africa, and his exploration of its waters. After a severe struggle with

the tropical luxuriance of grasses and reeds through which the approach to the lake led, Burton rode to the summit of a steep and stony hill, where he asked his servant, Bombay, "What is that streak of light which lies below?" "I am of the opinion," said Bombay, "that that is *the* water." A few yards farther, and a scene burst upon his view that filled him with wonder and delight.]

NOTHING, in sooth, could be more picturesque than this first view of the Tanganyika Lake, as it lay in the lap of the mountains, basking in the gorgeous tropical sunshine. Below and beyond a short foreground of rugged and precipitous hill-fold, down which the foot-path zigzags painfully, a narrow strip of emerald green, never sere and marvellously fertile, shelves towards a ribbon of glistening yellow sand, here bordered by sedgy rushes, there cleanly and clearly cut by the breaking wavelets. Farther in front stretch the waters, an expanse of the lightest and softest blue, in breadth varying from thirty to thirty-five miles, and sprinkled by the crisp east wind with tiny crescents of snowy foam. The background in front is a high and broken wall of steel-colored mountain, here flecked and capped with pearly mist, there standing sharply pencilled against the azure air; its yawning chasms, marked by a deeper plum-color, fall towards dwarf hills of mound-like proportions, which apparently dip their feet in the wave.

To the south, and opposite the long low point behind which the Malagarazi River discharges the red loam suspended in its violent stream, lie the bluff headlands and capes of Uguhha, and, as the eye dilates, it falls upon a cluster of outlying islets speckling a sea-horizon. Villages, cultivated lands, the frequent canoes of the fishermen on the waters, and on a nearer approach the murmurs of the waves breaking upon the shore, give a something of variety, of movement, of life to the landscape, which, like all the fairest prospects in these regions, wants but a little of the

neatness and finish of art,—mosques and kiosks, palaces and villas, gardens and orchards,—contrasting with the profuse lavishness and magnificence of nature, and diversifying the unbroken *coup d'œil* of excessive vegetation, to rival, if not to excel, the most admired scenery of the classic regions. The riant shores of this vast crevasse appeared doubly beautiful to me after the silent and spectral mangrove creeks on the East African seaboard, and the melancholy, monotonous experience of desert and jungle scenery, tawny rock and sun-parched plain, or rank herbage and flats of black mire. Truly it was a revel for soul and sight.

[Early the next morning Burton procured a boat, and set out over the quiet water towards the town of Ujiji, his present destination. He was surprised to see no indications of the important commercial mart he had been led to expect.]

Around the ghaut a few scattered huts, in the humblest beehive shape, represented the port-town. Advancing some hundred yards through a din of shouts and screams, tom-toms, and trumpets, which defies description, and mobbed by a swarm of black beings, whose eyes seemed about to start from their heads with surprise, I passed a relic of Arab civilization, the "bazaar." It is a plot of higher ground, cleared of grass, and flanked by a crooked tree; there between ten A.M. and three P.M.—weather permitting—a mass of standing and squatting negroes buy and sell, barter and exchange, offer and chaffer with a hubbub heard for miles, and there a spear- or dagger-thrust brings on, by no means unfrequently, a skirmishing faction-fight. The articles exposed for sale are sometimes goats, sheep, and poultry, generally fish, vegetables, and a few fruits, plantains, and melons; palm wine is a staple commodity, and occasionally an ivory or a slave is hawked

about; those industriously disposed employ themselves during the intervals of bargaining in spinning a coarse yarn with the rudest spindle, or in picking the cotton, which is placed in little baskets on the ground.

I was led to a ruinous tembe, built by an Arab merchant, Hamid bin Salim, who had allowed it to be tenanted by ticks and slaves. Situated, however, half a mile from, and backed by, the little village of Kawele, whose mushroom huts barely protruded their summits above the dense vegetation, and placed at a similar distance from the water in front, it had the double advantage of proximity to provisions, and of a view which at first was highly enjoyable. The Tanganyika is ever seen to advantage from its shores; upon its surface the sight wearies with the unvarying tintage,—all shining greens and hazy blues,—while continuous parallels of lofty hills, like the sides of a huge trough, close the prospect and suggest the idea of confinement. . . .

Ujiji—also called Manyofo, which appears, however, peculiar to a certain sultanat or district—is the name of a province, not, as has been represented, of a single town. It was first visited by the Arabs about 1840, ten years after they had penetrated to Unyamwezi; they found it conveniently situated as a mart upon the Tanganyika Lake, and a central point where their depots might be established, and whence their factors and slaves could navigate the waters and collect slaves and ivory from the tribes upon its banks.

Abundant humidity and a fertile soil, evidenced by the large forest-trees and the profusion of ferns, render Ujiji the most productive province in this section of Africa: vegetables, which must elsewhere be cultivated, here seem to flourish almost spontaneously. Rice of excellent quality was formerly raised by the Arabs upon the shores of the Tanganyika; it grew luxuriantly, attaining, it is said, the height of eight or nine feet. The inhabitants, however,

preferring sorghum, and wearied out by the depredations of the monkey, the elephant, and the hippopotamus, have allowed the more civilized cereal to degenerate.

The bazaar at Ujiji is well supplied. Fresh fish of various kinds is always procurable, except during the violence of the rains: the people, however, invariably cut it up and clean it out before bringing it to market. Good honey abounds after the wet monsoon. By the favor of the chief, milk and butter may be purchased every day. Long-tailed sheep and well-bred goats, poultry and eggs,—the two latter are never eaten by the people,—are brought in from the adjoining countries: the Arabs breed a few Manilla ducks, and the people rear, but will not sell, pigeons. . . .

The lakists are an almost amphibious race, excellent divers, strong swimmers and fishermen, and vigorous ichthyophagists all. At times, when excited by the morning coolness and by the prospect of a good haul, they indulge in a manner of merriment which resembles the gambols of sportive water-fowls: standing upright and balancing themselves in their hollow logs, which appear but little larger than themselves, they strike the water furiously with their paddles, skimming over the surface, dashing to and fro, splashing one another, urging forward, backing, and wheeling their craft, now capsizing, then regaining their position with wonderful dexterity. They make coarse hooks, and have many varieties of nets and creels. Conspicuous on the waters and in the villages is the dewa, or "otter" of Oman, a triangle of stout reeds, which shows the position of the net. A stronger kind, and used for the larger ground-fish, is a cage of open basket-work, provided like the former with a bait and two entrances. The fish once entangled cannot escape, and a log of wood used as a trimmer, attached to a float-rope of rushy plants, directs the fisherman.

The Wajiji are considered by the Arabs to be the most troublesome race in these black regions. They are taught by the example of their chiefs to be rude, insolent, and extortionate; they demand beads even for pointing out the road; they will deride and imitate a stranger's speech and manner before his face; they can do nothing without a long preliminary of the fiercest scolding; they are as ready with a blow as with a word; and they may often be seen playing at "rough and tumble," fighting, pushing, and tearing hair, in their boats. A Mjiji uses his dagger or his spear upon a guest with little hesitation; he thinks twice, however, before drawing blood, if it will cause a feud. Their roughness of manner is dashed with a curious ceremoniousness. When the sultan appears among his people, he stands in a circle and claps his hands, to which all respond in the same way. Women courtesy to one another, bending the right knee almost to the ground. When two men meet, they clasp each other's arms with both hands, rubbing them up and down, and ejaculating for some minutes, 'Nama sanga? nama sanga?"—Art thou well? They then pass the hands down to the forearm, exclaiming, "Wáhke? wáhke?"—How art thou? and finally they clap palms at each other, a token of respect which appears common to these tribes of Central Africa. The children have all the frowning and unprepossessing look of their parents; they reject little civilities, and seem to spend life in disputes, biting and clawing like wild-cats. There appears to be little family affection in this undemonstrative race. . . .

At first the cold damp climate of the Lake Regions did not agree with us; perhaps, too, the fish diet was overrich and fat, and the abundance of vegetables led to little excesses. All energy seemed to have abandoned us. I lay for a fortnight upon the earth, too blind to read or write

except with long intervals, too weak to ride, and too ill to converse. My companion, who, when arriving at the Tanganyika Lake, was almost as "groggy" upon his legs as I was, suffered from a painful ophthalmia, and from a curious distortion of face, which made him chew sideways, like a ruminant. Valentine was nearly blind; and he also had a wry mouth, by no means the properest for the process of mastication. Gaetano, who arrived at Ujiji on the 17th of February, was half starved, and his anxiety to make up for lost time brought on a severe attack of fever. The Baloch complained of influenzas and catarrhs: too lazy to build huts after occupying Kannena's "Traveller's Bungalow" for the usual week, they had been turned out in favor of fresh visitors, and their tempers were as sore as their lungs and throats.

[Having procured canoes, Burton set out to explore the lake to the north, where he was told a large river flowed from it. For several days they coasted along the eastern shore.]

This is the place for a few words concerning boating and voyaging upon the Tanganyika Lake. The Wajiji, and indeed all these races, never work silently or regularly. The paddling is accompanied by a long, monotonous, melancholy howl, answered by the yells and shouts of the chorus, and broken occasionally by a shrill scream of delight from the boys which seems violently to excite the adults. The bray and clang of the horns, shaums, and tom-toms, blown and banged incessantly by one or more men in the bow of each canoe, made worse by brazen-lunged imitations of these instruments in the squeaking trebles of the younger paddlers, lasts throughout the livelong day, except when terror induces a general silence.

These "Wáná Máji"—sons of water—work in "spirts," applying lustily to the task till the perspiration pours

down their sooty persons. Despite my remonstrances, they insisted upon splashing the water in shovelfuls over the canoe. They make terribly long faces, however, they tremble like dogs in a storm of sleet, and they are ready to whimper when compelled by sickness or accident to sit with me under the endless cold-wave bath in the hold. After a few minutes of exertion, fatigued and worn, they stop to quarrel, or they progress languidly till recruited for another effort. When two boats are together they race continually till a bump—the signal for a general grin—and the difficulty of using the entangled paddles afford an excuse for a little loitering, and for the loud chatter and violent abuse without which apparently this people cannot hold converse. At times they halt to eat, drink, and smoke: the bhang-pipe is produced after every hour, and the paddles are taken in while they indulge in the usual screaming, convulsive, whooping cough. They halt for their own purposes, but not for ours; all powers of persuasion fail when they are requested to put in to a likely place for collecting shells or stones.

For some superstitious reason they allow no questions to be asked; they will not dip a pot for water into the lake, fearing to be followed and perhaps boarded by crocodiles, which are hated and dreaded by these black navigators, much as is the shark by our seamen; and for the same cause not a scrap of food must be thrown overboard; even the offal must be cast into the hold. "Whittling" is here a mortal sin: to chip or break off the smallest bit of even a condemned old tub drawn up on the beach causes a serious disturbance. By the advice of a kind and amiable friend, I had supplied myself with the desiderata for sounding and ascertaining the bottom of the lake: the crew would have seen me under water rather than halt for a moment when it did not suit their purpose. The wild

men lose half an hour, when time is most precious, to secure a dead fish as it floats past the canoe entangled in its net. They never pass a village without a dispute, some wishing to land, others objecting because some wish it. The captain, who occupies some comfortable place in the bow, stern, or waist, has little authority; and if the canoe be allowed to touch the shore, its men will spring out, without an idea of consulting aught beyond their own inclinations. Arrived at the halting-place, they pour on shore; some proceed to gather firewood, others go in search of rations, and others raise the boothies.

[The explorer failed to reach the northern extremity of the lake, and to see the river spoken of, through troubles with the Arabs and his rowers. He also found himself without sufficient goods to enable him to obtain the means of exploring the lake south of the Ujiji. He had barely enough to reach the coast by the shortest route, and was forced to be content with what he had already learned. He thus sums up the result of his observations on the lake.]

The Tanganyika occupies the centre of the length of the African continent, which extends from 32° N. to 33° S. latitude, and it lies on the western extremity of the eastern third of the breadth. Its general direction is parallel to the inner African line of volcanic action drawn from Gondar southward through the regions about Kilimangáo (Kilimanjáro) to Mount Njesa, the eastern wall of the Nyassa Lake. The general formation suggests, as in the case of the Dead Sea, the idea of a volcano of depression, —not, like the Nyanza or Ukerewe, a vast reservoir formed by the drainage of mountains. Judging from the eye, the walls of this basin rise in an almost continuous curtain, rarely waving and infracted, to two thousand or three thousand feet above the water-level. The lower slopes are well wooded: upon the higher summits large trees are said not to grow; the deficiency of soil, and the

prevalence of high, fierce winds, would account for the phenomenon. The lay is almost due north and south, and the form a long oval, widening in the central portions and contracting systematically at both extremities.

[The total length is somewhat less than two hundred and fifty geographical miles.]

About Ujiji the water appears to vary in breadth from thirty to thirty-five miles, but the serpentine form of the banks, with a succession of serrations and indentations of salient and re-entering angles,—some jutting far and irregularly into the bed,—render the estimate of average difficult. The Arabs agree in correctly stating, that opposite Ujiji the shortest breadth of the lake is about equal to the channel which divides Zanzibar from the mainland, or between twenty-three and twenty-four miles. At Uvira the breadth narrows to eight miles. Assuming, therefore, the total length at two hundred and fifty, and the mean breadth at twenty geographical miles, the circumference of the Tanganyika would represent, in round numbers, a total of five hundred and fifty miles; the superficial area, which seems to vary little, covers about five thousand square miles. . . .

A careful investigation and comparison of statements leads to the belief that the Tanganyika receives and absorbs the whole river-system—the net-work of streams, nullahs, and torrents—of that portion of the Central African depression whose water-shed converges towards the great reservoir. Geographers will doubt that such a mass, situated at so considerable an altitude, can maintain its level without an effluent. Moreover, the freshness of the water would, under normal circumstances, argue the escape of saline matter washed down by the influents from the area of drainage. But may not the Tanganyika, situated, like the Dead Sea, as the reservoir for supplying with humidity

the winds which have parted with their moisture in the barren and arid regions of the south, maintain its general level by the exact balance of supply and evaporation? And may not the saline particles deposited in its waters be wanting in some constituent which renders them evident to the taste?

LAKES TANGANYIKA AND NYASSA AND THE SHIRÉ RIVER.

HERMANN VON WISSMANN.

[Wissmann's journey through Equatorial Africa led him, in its final course, to Lake Tanganyika, down which he passed from Ujiji to the road leading to Lake Nyassa. Embarking on the latter lake, he sailed down its length, and then pursued his journey by way of the Shiré River to the Zambesi, whose waters quickly brought him to civilized settlements. We take him up in his journey on the waters of the first-named lake.]

THE water of the lake is clear, of a somewhat brackish taste, caused, I suppose, by its saline contents. The banks are covered with many different shells. Sea-gulls were very plentiful, whereas I saw fresh-water birds only near the mouths of rivers and brooks. These were the only spots where we found hippopotami and crocodiles, which are said to venture exceptionally far into the lake. During the day we had to encounter high breakers and a smart breeze, which made rowing very difficult. In the evening it generally grew calmer, or a land breeze would set in, enabling us to sail along the coast southward.

We always proceeded on our nocturnal journeys until the smart morning breeze set in, when we sought refuge in a sheltering part and rested until the abating of the wind permitted us to continue our journey. Our Wajiji would sometimes throw beads and pieces of stuff into the water

in order to pacify the water-spirit. When the weather was calm, and I forced them to take the oars, they would wheeze like German water-rats. As the thunder-storms during the rainy season often bring violent gales in their train, a vessel used on the Tanganyika should be a thoroughly seaworthy ship. . . .

When we resumed our journey we sailed for three hours through yellow-tinted water; the color was owing to small flakes, probably the seeds of a water-plant. The banks became more rocky and picturesque; huge boulders forming high precipices caused immense breakers. From the boat we observed a couple of leopards with two cubs basking on one of the rocks. I landed with Bugslag, but we missed the chance of firing at them by trying to creep closer along; the handsome creatures had disappeared in the maze of rocks. Vexed at our failure, we were just about to return, when deep below us among the rubble we distinctly heard the mewing of the young leopards, but could not in any way succeed in getting at them.

The banks grew more and more splendid. Immense pillars projected into the deep green water; passages and capes more than ten metres high opened out below the rocks. The wild scenery, now and again interrupted by luxuriant vegetation in connection with the conformations of the rocks, presented a striking picture. A herd of about one hundred baboons suffered us to pass them without showing any more irritation than the short disconnected tones of surprise peculiar to them, which resemble the startled cry of a roebuck. By shooting into the water, not at the monkeys,—for ever since I saw a large ape in the agony of death I have entirely lost my taste for such animal hunts,—a most ridiculous scene was brought about. Shrieks, barking, and quarrelling proceeded from each throat of this young party. The strange figures, among which we

were struck by some species of nearly double the ordinary size, waddled and galloped in grotesque leaps up the precipice, and a shower of rubble and stones, among them boulders of several hundred-weight, kept tumbling down to us into the lake.

Our people roared with laughter, and would have it that the monkeys had aimed at us. For further observation I shot once more, and again a shower of stones pelted down upon us, so that I felt inclined to agree with the Wajiji; for the number of stones was too great to have rolled down accidentally under the movements of the flying monkeys.

In the splendidly clear waters, in which we could see stones at about fifteen metres' distance, we noticed great abundance of fish, by which our Wajiji greatly profited. . . .

From Niumkorlo [where the lake was left, near its southern end, for the land journey to the Nyassa] we ascended the steep and rocky slope; we passed the Nunsua and Manbesi, and encamped in the wilderness in a meadow pleasantly relieved by an immeasurable tree-savanna. The rainy season having set in, many watercourses were rushing down to the lake in magnificent cascades, which, wherever they came to a stand-still, formed bogs and pools, and so afforded a favorite resort for buffaloes. Guinea-fowls were very plentiful, and for the last few days had rarely been wanting on board. I never saw wild grapes so large and sweet as they were here.

[We shall not follow our traveller on his journey overland to the Nyassa, it being attended by no incident of special interest, but return to him after his embarkation on the waters of this important lake.]

The Nyassa, in its shape and situation and meteorological aspects, greatly resembles the Tanganyika. Here, as there, a strong southeasterly breeze blows continually during the

dry season, causing a very rough sea; here, as there, the calm is frequently interrupted by thunder-storms, which, however, are said not to be accompanied by such gales as are met with on the Tanganyika. During the rainy season water-spouts are frequent. Far more rain falls in the peninsulas or promontories projecting into the lake than farther inland. On the whole, more rain falls on the lake than on the coast.

Navigation on this lake is difficult, as the sands reach out to a distance of five English miles from the shore, while reefs threaten the navigator for sometimes two English miles off the coast. Huge rocks tower here and there from the sandy shallows, or form a striking contrast to the light-colored sand beneath the clear water. Contrary to the frequently brackish water of the Tanganyika, that of the Nyassa is clear and sweet, which accounts for the entirely different fauna of the lake. That of the Tanganyika more nearly resembles that of the sea, while the Nyassa is the abode of animals which are observed in every fresh-water lake.

The beach of the Tanganyika is covered with many kinds of shells; gulls and sea-swallows sport on the banks, while fresh-water birds are only found at the mouths of the rivers. The banks of the Nyassa are destitute of shells; there are no sea-nettles, as on the other lake; and cormorants everywhere perch on the bare trees at the water-side,—trees that have died as a result of the noxious excrement of these birds. Where the banks of the Nyassa are uninhabited, they display abundance of game. Buffaloes, wild antelopes, and giraffes are frequent; and from the mainland the sound of the lion's roar, an animal that can live only where there is plenty of game, induced us to undertake frequent hunting expeditions in places where we dropped anchor for cutting wood.

Bugslag once shot an antelope near the bank, and came to the beach to call some people to carry the game to the boat. On returning he found only scanty remains of the animal, which had been torn to pieces; with difficulty he succeeded in driving away some impudent vultures. Traces showed that during his absence some hyenas had possessed themselves of the prey. In similar cases I have spread my handkerchief or part of my clothes on the game, and so caused the beasts of prey to be scared away by scenting the nearness of man.

One evening our men, who had been fetching fire-wood to the beach, were sitting round the fire they had made, when suddenly a buffalo broke from a thicket and hurried past them. Immediately behind him two lions jumped out, but, frightened by the fire and the presence of men, they abstained from pursuing the buffalo any farther, and after a short pause retreated into the thicket.

At one point of the lake, where lagoons, intersected by jungles and thickets of reeds, stretched for miles landward, we dropped anchor one evening, but could scarcely get any sleep on account of the incessant roaring and tramping of hundreds of hippopotami, which in the evening exchange the lagoons for the banks of the lake.

Next day I landed with Bugslag and entered upon a wilderness, than which a better cannot be imagined for the home of the huge behemoth. Lagoons, creeks, and dried-up watercourses furrowed in inextricable lines an either muddy or sandy flat, covered with jungle-like reeds or marshy plants. Only the splashing of a frightened hippopotamus, or a short, far-sounding bellow, interrupted the deep calm of this pathless wilderness, where only the narrow tunnel-shaped dwellings of the huge pachydermata, running through the jungles, could be traced. Once, when knee-deep in the water in a bent attitude, proceeding

under the jungles which closed immediately above our heads, we suddenly met a gigantic hippopotamus. For a moment the animal stopped short, and afterwards, to our great satisfaction, broke away in a side direction. After this startling encounter we preferred giving up the exploration of this wilderness.

In the south the lake scenery is beautiful. High hills advance there close to the bank, tongues of land form harbors, and many islands or high reefs of rocks break the monotony of the flat banks. The traffic on the lake is not so lively as on the Tanganyika.

On the west side of the Nyassa are two large settlements of slave-traders, Arabs and people of Kilwa and Lindi. These Arabs transact their chief business with the murderous Wawemba. They supply the latter with guns, powder, cloth, and beads in exchange for slaves. Ivory is, in proportion, rarely brought here, for in these latitudes—I may say from the eighth degree south latitude southward—the gun is found throughout the continent, and this has immensely decreased the number of elephants. Only in large pathless deserts is the elephant still found as stationary game.

Bugslag, in cutting wood for the steamer, came upon a large settlement of slave-catchers, those nefarious vagabonds who depopulate Africa; the same miserable robbers of human flesh and blood, with the same insolence and barbarism usual with men of such an occupation, as in the northern centres of the slave-trade. Nay, he was thankful to find himself on board again unscathed, for he had been jeered at and threatened.

[There are also missionary stations adjoining the Nyassa, but apparently much less successful in their purpose than are the slave-traders. He thus describes one of these:]

In a harbor much sheltered by islands we dropped anchor off the missionary station Livingstonia. This rather neglected station was inhabited by only one black schoolmaster. The climate is so fatal that the missionary societies have abandoned the idea of sending white men or Europeans to this place. A very large number of graves bore witness to the unhealthy nature of this locality, which in its outer dress has been so much favored by nature. From the ever-smooth, deep-blue, narrow harbor the mainland soon rises to an imposing height, only leaving a short strip of level land on the banks. Fan-palms and huge adansonias surround the banks, and numerous villages peep out of the thickets of bananas. The southern part of the lake is rich in fish, and in the evening the great number of fishing-canoes, lighted up with fires, presented a splendid picture.

On the 26th [of July, 1887] we entered the affluent of the Nyassa, the Shiré. This river varies in breadth from eighty to one hundred metres, and has at its commencement level banks, here and there showing thickets of reeds and papyrus. The coasts are densely populated, and when busy crossing an apparently much-frequented ferry, we met a slave caravan with Arabs. This is the most southern point visited by Arabs; farther south and southwest the tribes are too numerous and strongly armed to make slave-hunting profitable.

After some little time the Shiré falls into a lake of about two German miles in length. This is the Pamolondo, which has particularly clear water, and such an equal depth that we measured everywhere almost exactly ten feet. This little lake greatly abounds in fish, and never have I seen pelicans in such numbers as here. In the same latitude as before the Shiré flows out of the small lake. The banks of the river change, are less populated, and consequently abound in game, as does the river itself, which swarms

NIGHT AT A POND IN AFRICA

with hippopotami and crocodiles. We often saw large droves of zebras, and at night frequently heard the mighty thundering voice of the lord of the desert.

On the 28th we reached Mutope, a small station of the Commercial Company, and with it for the present the end of our journey; for some way farther down rapids and small falls interrupt the navigation of the river. . . .

Choosing a broad road with traces of wheels, I rode in advance of my troop on a horse sent to meet me, and in the afternoon reached Blantyre, the large Scotch missionary station, and afterwards Mandala, the station of the African Lakes Company. The broad roads, the avenues of beautiful lofty trees, mostly eucalyptus, the numerous houses, neatly built in European fashion of bricks, with glass windows, and surrounded by pretty gardens, fields of European corn, and similar signs of civilization, awakened within me the same comfortable feeling as if I had been in Europe.

These two settlements are the best and most highly developed I have seen in Inner Africa. A large number of merchants, missionaries, schoolmasters, tradespeople, and fine ladies, all Scotch by birth, formed a colony imposing for these parts, and their looks proved the climate to be comparatively healthy. Both stations may be considered prominent test stations for this part of the tropics, for I could scarcely say what has been unattempted in the way of garden and field culture, plantations, and cattle-breeding. At the missionary station corn, vegetables, and flowers were cultivated, and cattle bred, solely for the maintenance of the black and white population; but they had at Mandala, after several attempts, fallen back chiefly upon coffee plantations, and had even brought over the necessary apparatus for husking and cleansing the coffee.

It would lead me too far were I to enlarge upon the

results of the different experiments. But not to give the reader a wrong idea of the results of such undertakings, I must not omit to mention that large sums of money, probably mostly arising from pious legacies, were invested here without the necessity of obtaining corresponding interest. An undertaking meant to pay cannot from the beginning be furnished with such comfort—I might say luxury—as these two stations, one of which, the missionary station, was founded and is maintained by donations, which, practically speaking, *à fond perdu*, have only been given for converting the heathen to Christianity. The African Lakes Company is likewise partly a commercial, partly a missionary, association, and in like manner chiefly subsists on donations. . . .

I resumed my downward journey on the Shiré on the 25th. The first two or three German miles of the river can hardly be called navigable, on account of the islands, sands, and narrow channels. The river, which now and then assumes the shape of lagoons, has deep banks, with plain grass savanna relieved by groves of borassus palms. The banks are in some places literally covered with crocodiles, of which Bugslag and I shot a large number. The muscular power of such a reptile is remarkable. The animal, after being hit, would jump up repeatedly more than a metre high; then he would throw himself on his back and lie dead on the spot. Others, not mortally wounded, would plunge into the river with extraordinarily vigorous leaps. In some places we came upon such numbers of hippopotami that now and then they endangered the safety of the boat. What sounded like the distant rolling of thunder once made us start up in wonder, it being the dry season and the sky being serene; but a violent vibration of the boat afterwards, and the rising of air-bubbles alongside, convinced us that it had been caused by the

snorting of a hippopotamus, which strangely resembles the noise of distant thunder. . . .

A very comical sight, which incited our black followers to roars of laughter, was a gigantic heron standing in the shallow water, shot through his wing. The bird had attacked with his beak one of my men who went to fetch him, pushed the man on in front till he fell down in the water, and belabored him till a shot from Bugslag's gun wounded the heron's wing and put an end to this unequal struggle.

On the 27th we passed a vast level and monotonous wilderness, where now and then fan-palms towered above the high grass and low brushwood. Elephants are still plentiful in this wilderness, as we learned from their many tracks leading into the water; but though we had been told at Mandala that we should frequently encounter large herds of them, we scarcely caught sight of one. There were, however, large flocks of antelopes, more numerous than I had ever before seen them. Out of a flock of at least one hundred and fifty, Bugslag shot a large ram, which supplied us with meat for three days. . . .

Next day we passed, on the right, some enormous lagoons, stretching far into the land, and supplied by a branch of the Shiré. A shot at a crocodile had an extraordinary effect. Clouds of birds, which enlivened the sloughs and lagoons, rose with a deafening noise. Ducks, geese, pelicans, herons, storks, rails, snipe, and innumerable other species in many thousands suddenly disturbed the still life of the water-waste. On the 31st the oarsmen pulled us from the waters of the Shiré into the broad, imposing Father Zambesi.

[On August 8 the Portuguese harbor of Quilimane, at the mouth of the Zambesi, was reached, and the long journey through barbaric lands was at an end.]

THE PEOPLE AND FORESTS OF EASTERN AFRICA.

HENRY DRUMMOND.

[The description of Africa by travellers began, a fraction of a century ago, by long-drawn-out narratives of a plunge into the unknown, an incessant battle with man and nature, and an unceasing feast of mysteries. Such is rapidly ceasing to be the case. Africa is no longer a "dark continent." It has been traversed east and west, north and south, and the more recent travellers are beginning to take up the fragments of detail which their predecessors left untouched. Drummond's "Tropical Africa" is one of these later works, and from it we have chosen a description of African forest paths which has excited much general interest.]

SOMEWHERE in the Shiré Highlands, in 1859, Livingstone saw a large lake,—Lake Shirwa,—which is still almost unknown. It lies away to the east, and is bounded by a range of mountains whose lofty summits are visible from the hills round Blantyre [a missionary station on the Shiré]. . . . The waters of Shirwa are brackish to the taste and undrinkable; but the saltness must have a peculiar charm for game, for nowhere else in Africa did I see such splendid herds of the larger animals as here. The zebra was especially abundant; and so unaccustomed to be disturbed are these creatures, that with a little care one could watch their movements safely within a very few yards. It may seem unorthodox to say so, but I do not know if among the larger animals there is anything handsomer in creation than the zebra. At close quarters his striped coat is all but as fine as the tiger's, while the form and movement of his body are in every way nobler. The gait, certainly, is not to be compared for gracefulness with that of the many species of antelope and deer who nibble the grass beside

him, and one can never quite forget that scientifically he is an ass; but taking him all in all, this fleet and beautiful animal ought to have a higher place in the regard of man than he has yet received.

We were much surprised, considering that this region is almost uninhabited, to discover near the lake shore a native path so beaten, and so recently beaten, by multitudes of human feet, that it could only represent some trunk route through the continent. Following it for a few miles, we soon discovered its function. It was one of the great slave routes through Africa. Signs of the horrid traffic soon became visible on every side; and from symmetrical arrangements of small piles of stones and freshly-cut twigs, planted semaphore-wise upon the path, our native guides made out that a slave-caravan was actually passing at the time. We were, in fact, between two portions of it, the stones and twigs being telegraphic signals between front and rear. Our natives seemed much alarmed at this discovery, and refused to proceed unless we promised not to interfere,—a proceeding which, had we attempted it, would simply have meant murder for us and slavery for them. Next day, from a hill-top, we saw the slave encampment far below, and the ghastly procession marshalling for its march to the distant coast, which many of the hundreds who composed it would never reach alive.

Talking of native foot-paths leads me to turn aside for a moment to explain to the uninitiated the true mode of African travel. In spite of all the books that have been lavished upon us by our great explorers, few people seem to have any accurate understanding of this most simple process. Some have the impression that everything is done by bullock-wagons,—an idea borrowed from the Cape, but hopelessly inapplicable to Central Africa, where a wheel at present would be as great a novelty as a polar bear. Others

at the opposite extreme suppose that the explorer works along solely by compass, making a bee-line for his destination, and steering his caravan through the trackless wilderness like a ship at sea. Now it may be a surprise to the unenlightened to learn that probably no explorer in forcing his passage through Africa has ever, for more than a few days at a time, been off some beaten track. Probably no country in the world, civilized or uncivilized, is better supplied with paths than this unmapped continent. Every village is connected with some other village, every tribe with the next tribe, every state with its neighbor, and therefore with all the rest.

The explorer's business is simply to select from this network of tracks, keep a general direction, and hold on his way. Let him begin at Zanzibar, plant his foot on a native foot-path, and set his face towards Tanganyika. In eight months he will be there. He has simply to persevere. From village to village he will be handed on, zigzagging it may be sometimes to avoid the impossible barriers of nature or the rarer perils of hostile tribes, but never taking to the woods, never guided solely by the stars, never in fact leaving a beaten track, till hundreds and hundreds of miles are between him and the sea, and his interminable foot-path ends with a canoe, on the shores of Tanganyika. Crossing the lake, landing near some native village, he picks up the thread once more. Again he plods on and on, now on foot, now by canoe, but always keeping his line of villages, until one day suddenly he sniffs the sea-breeze again, and his faithful foot-wide guide lands him on the Atlantic seaboard.

Nor is there any art in finding out these successive villages with their intercommunicating links. He *must* find them out. A whole army of guides, servants, carriers, soldiers, and camp-followers accompany him in his march,

and this nondescript army must be fed. Indian corn, cassava, mawere, beans, and bananas,—these do not grow wild even in Africa. Every meal has to be bought and paid for in cloth and beads; and scarcely three days can pass without a call having to be made at some village where the necessary supplies can be obtained.

A caravan, as a rule, must live from hand to mouth, and its march becomes simply a regulated procession through a chain of markets. Not, however, that there are any real markets,—there are neither bazaars nor stores in native Africa. Thousands of the villages through which the traveller eats his way may never have victualled a caravan before. But, with the chief's consent, which is usually easily purchased for a showy present, the villages unlock their larders, the women flock to the grinding-stones, and basketfuls of food are swiftly exchanged for unknown equivalents in beads and calico.

The native tracks which I have just described are the same in character all over Africa. They are veritable foot-paths, never over a foot in breadth, beaten as hard as adamant, and rutted beneath the level of the forest bed by centuries of native traffic. As a rule, these foot-paths are marvellously direct. Like the roads of the old Romans, they run straight on through everything, ridge and mountain and valley, never shying at obstacles, nor anywhere turning aside to breathe.

Yet within this general straightforwardness there is a singular eccentricity and indirectness in detail. Although the African foot-path is on the whole a bee-line, no fifty yards of it are ever straight. And the reason is not far to seek. If a stone is encountered no native will ever think of removing it. Why should he? It is easier to walk round it The next man who comes that way will do the same. He knows that a hundred men are following him;

he looks at the stone; a moment, and it might be unearthed and tossed aside, but no; he also holds on his way. It is not that he resents the trouble, it is the idea that is wanting. It would no more occur to him that that stone was a displaceable object, and that for the general weal he might displace it, than that its feldspar was of the orthoclase variety. Generations and generations of men have passed that stone, and it still waits for a man with an altruistic idea.

But it would be a very stony country indeed—and Africa is far from stony—that would wholly account for the aggravating obliqueness and indecision of the African foot-path. Probably each four miles, on an average path, is spun out by an infinite series of minor sinuosities to five or six. Now these deflections are not meaningless. Each has some history,—a history dating back perhaps a thousand years, but to which all clue has centuries ago been lost. The leading cause probably is fallen trees. When a tree falls across a path no man ever removes it. As in the case of the stone, the native goes round it. It is too green to burn in his hut; before it is dry, and the white ants have eaten it, the new détour has become part and parcel of the path. The smaller irregularities, on the other hand, represent the trees and stumps of the primeval forest where the track was made at first. But whatever the cause, it is certain that for persistent straightforwardness in the general, and utter vacillation and irresolution in the particular, the African roads are unique in engineering.

[Before proceeding with this chapter of Professor Drummond's work, we must turn to another part of the book, and describe the principal means by which African forests and meadows are relieved of the débris of fallen trees. It is the wood-eating termite, or white ant, that does it.]

In travelling through the great forests of the Rocky Mountains or of the Western States, the broken branches and fallen trunks strewing the ground breast-high with all sorts of decaying litter frequently make locomotion impossible. To attempt to ride through these Western forests with their meshwork of interlocked branches and decaying trunks, is often out of the question, and one has to dismount and drag his horse after him as if he were clambering through a wood-yard. But in an African forest not a fallen branch is seen. One is struck at first at a certain clean look about the great forests of the interior, a novel and unaccountable cleanness, as if the forest bed was carefully swept and dusted daily by unseen elves.

And so indeed it is. Scavengers of a hundred kinds remove decaying animal matter,—from the carcass of a fallen elephant to the broken wing of a gnat,—eating it, or carrying it out of sight, and burying it in the deodorizing earth. And the countless millions of termites perform a similar function for the vegetable world, making away with all plants and trees, all stems, twigs, and tissues, the moment the finger of decay strikes the signal. Constantly in these woods one comes across what appear to be sticks and branches and bundles of fagots, but when closely examined they are seen to be mere casts in mud. From these hollow tubes, which preserve the original form of the branch down to the minutest knot or fork, the ligneous tissue is often entirely removed, while others are met with in all stages of demolition. . . . When a fallen trunk lying upon the ground is the object of attack, the outer cylinder is frequently left quite intact, and it is only when one tries to drag it off to his camp-fire that he finds to his disgust that he is dealing with a mere hollow tube a few lines in thickness filled up with mud.

[This mud is carried in industriously by the termites, and built into tunnels and galleries, within which they work safe from the assaults of their numerous enemies. The working white ants never appear above ground except as a dire necessity. With this digression we shall return to Lake Shirwa.]

Though one of the smaller African lakes, Shirwa is probably larger than all the lakes of Great Britain put together. With the splendid environment of mountains on three of its sides, softened and distanced by perpetual summer haze, it reminds one somewhat of the Great Salt Lake simmering in a July sun. We pitched our tent for a day or two on its western shore among a harmless and surprised people who had never gazed on the pallid countenances of Englishmen before. Owing to the ravages of the slaver the people of Shirwa are few, scattered, and poor, and live in abiding terror. The densest population is to be found on the small island, heavily timbered with baobabs, which forms a picturesque feature of the northern end. These Wa-Nyassa, or people of the lake, as they call themselves, have been driven here by fear, and they rarely leave their lake-dwelling unless under cover of night. Even then they are liable to capture by any man of a stronger tribe who happens to meet them, and numbers who have been kidnapped in this way are to be found in the villages of neighboring chiefs. This is an amenity of existence in Africa that strikes one as very terrible. It is impossible for those at home to understand how literally savage man is a chattel, and how much of his time is spent in the safeguarding of his main asset,—*i.e.*, himself. There are actually districts in Africa where *three* natives cannot be sent a message, in case two should combine and sell the third before they return.

[Drummond thus describes the forests of East Central Africa and their inhabitants. For this description he has been severely taken to

task by Stanley,—but the two travellers gained their experience in different regions.]

Clothe the mountainous plateaux with endless forest,—not grand umbrageous forest like the forests of South America, nor matted jungle like the forests of India, but with thin, rather weak forest,—with forest of low trees, whose half-grown trunks and scanty leaves offer no shade from the tropical sun. Nor is there anything in these trees to the casual eye to remind you that you are in the tropics. Here and there one comes upon a borassus or fan-palm, a candelabra-like euphorbia, a mimosa aflame with color, or a sepulchral baobab. A close inspection will also discover curious creepers and climbers; and among the branches strange orchids hide their eccentric flowers. But the outward type of tree is the same as we have at home, —trees resembling the ash, the beech, and the elm, only seldom so large, except by the streams, and never so beautiful.

Day after day you may wander through these forests with nothing except the climate to remind you of where you are. The beasts, to be sure, are different, but unless you watch for them you will seldom see any; the birds are different, but you rarely hear them; and as for the rocks, they are our own familiar gneisses and granites, with honest basalt dykes boring through them, and leopard-skin lichens staining their weathered sides. Thousands and thousands of miles, then, of vast, thin forest, shadeless, trackless, voiceless,—forest in mountain and forest in plain, —this is East Central Africa. . . .

The fairy labyrinth of ferns and palms, the festoons of climbing plants blocking the paths and scenting the forests with their resplendent flowers, the gorgeous clouds of insects, the gayly-plumaged birds, the paroquets, the monkey swinging from his trapeze in the shaded bowers,—these

are unknown to Africa. Once a week you will see a palm; once in three months a monkey will cross your path; the flowers on the whole are few; the trees are poor; and, to be honest, though the endless forest-clad mountains have a sublimity of their own, and though there are tropical bits along some of the mountain-streams of exquisite beauty, nowhere is there anything in grace and sweetness and strength to compare with a Highland glen.

[This description has been caustically criticised by Stanley, who traversed forests in the Congo and northern lake region of the densest tropical luxuriance. The two travellers were in different regions, and both described what they saw.]

Hidden away in these endless forests, like birds'-nests in a wood, in terror of one another, and of their common foe the slaver, are small native villages; and here in his virgin simplicity dwells primeval man, without clothes, without civilization, without learning, without religion, the genuine child of nature, thoughtless, careless, and contented. This man is apparently quite happy; he has practically no wants. One stick, pointed, makes him a spear; two sticks rubbed together make him a fire; fifty sticks tied together make him a house. The bark he peels from them makes his clothes; the fruits which hang on them form his food. It is perfectly astonishing, when one thinks of it, what nature can do for the animal-man, to see with what small capital, after all, a human being can get through the world. I once saw an African buried. According to the custom of his tribe, his entire earthly possessions—and he was an average commoner—were buried with him. Into the grave, after the body, was lowered the dead man's pipe, then a rough knife, then a mud bowl, and last his bow and arrows, the bowstring cut through the middle, a touching symbol that its work was done. This was all. Four items, as an

auctioneer would say, were the whole belongings for half a century of this human being. No man knows what a man is till he has seen what a man can be without, and be withal a man. That is to say, no man knows how great man is till he has seen how small he has been once.

The African is often blamed for being lazy, but it is a misuse of words. He does not need to work; with so bountiful a nature round him, it would be gratuitous to work. And his indolence, therefore, as it is called, is just as much a part of himself as his flat nose, and as little blameworthy as slowness in a tortoise. The fact is, Africa is a nation of the unemployed.

This completeness, however, will be a sad drawback to development. Already it is found difficult to create new wants; and when labor is required, and you have already paid your man a yard of calico and a string of beads, you have nothing in your possession to bribe him to another hand's turn. Nothing almost that you have would be the slightest use to him. Among the presents which I took for chiefs, I was innocent enough to include a watch. I might as well have taken a grand piano. The mere idea of time has scarcely yet penetrated the African mind, and forms no element in his calculations. . . . I often wished I could get inside an African for an afternoon, and just see how he looked at things, for I am sure our worlds are as different as the color of our skins.

Talking of skins, I may observe in passing that the highland African is not a negro, nor is his skin black. It is a deep, full-toned brown, something like the color of a good cigar. The whole surface is diced with a delicate pattern, which gives it great richness and beauty, and I often thought how effective a row of books would be bound in native morocco. . . .

Too ill armed to hunt, they live all but exclusively on a

vegetable diet. A small part of the year they depend, like the monkeys, upon wild fruits and herbs; but the staple food is a small, tasteless millet-seed, which they grow in gardens, crush in a mortar, and stir with water into a thick porridge. Twice a day, nearly all the year round, each man stuffs himself with this coarse and tasteless dough, shovelling it into his mouth in handfuls, and consuming at a sitting a pile the size of an ant-heap.

His one occupation is to grow this millet, and his gardening is a curiosity. Selecting a spot in the forest, he climbs a tree, and with a small home-made axe lops off the branches one by one. He then wades through the litter to the next tree, and hacks it to pieces also, leaving the trunk standing erect. Upon all the trees within a circle of thirty or forty yards diameter his axe works similar havoc, till the ground stands breast-high in leaves and branches. Next, the whole is set on fire and burnt to ashes. Then, when the first rains moisten the hard ground and wash the fertile chemical constituents of the ash into the soil, he attacks it with his hoe, drops in a few handfuls of millet, and the year's work is over. . . .

Between the acts he does nothing but lounge and sleep; his wife, or wives, are the millers and bakers; they work hard to prepare his food, and are rewarded by having to take their own meals apart, for no African would ever demean himself by eating with a woman. I have tried to think of something else that these people habitually do, but their vacuous life leaves nothing more to tell.

DISCOVERY OF THE VICTORIA FALLS.

DAVID LIVINGSTONE.

[Dr. Livingstone, the most famous of African explorers, was of Scottish birth, being born at Blantyre, near Glasgow, March 19, 1813. He went to South Africa as a missionary in 1840, and from that time until his death, in 1873, was engaged in missionary labors and travels in that country, with few intermissions. His discoveries in South and Central Africa were numerous and strikingly interesting, none among them being of greater interest than that of the falls of the Zambesi, named by him Victoria Falls. We give his graphic description of this great cataract. Among the most striking events in Dr. Livingstone's career were his discovery by the daring explorer Henry M. Stanley, after he had long vanished in Central Africa, and the subsequent pathetic incidents of his death.]

ON the 3d of November we bade adieu to our friends at Linyanti, accompanied by Sekeletu and about two hundred followers. We were all fed at his expense, and he took cattle for this purpose from every station we came to. The principal men of the Makololo, Lebeóle, Ntlarié, Nkwatléle, etc., were also of the party. We passed through the patch of the *tsetse*,* which exists between Linyanti and Sesheke, by night. The majority of the company went on by daylight, in order to prepare our beds. Sekeletu and I, with about forty young men, waited outside the *tsetse* till dark. We then went forward, and about ten o'clock it became so pitchy dark that both horses and men were completely blinded. The lightning spread over the sky, forming eight or ten branches at a time, in shape exactly

* An African fly, whose bite is often fatal to horses, cattle, and dogs, though harmless to man.

like those of a tree. This, with great volumes of sheet-lightning, enabled us at times to see the whole country. The intervals between the flashes were so densely dark as to convey the idea of stone-blindness. The horses trembled, cried out, and turned round, as if searching for each other, and every new flash revealed the men taking different directions, laughing, and stumbling against each other.

While at Sesheke, Sekeletu supplied me with twelve oxen,—three of which were accustomed to being ridden upon,—hoes, and beads to purchase a canoe when we should strike the Leeambye beyond the falls. He likewise presented abundance of good fresh butter and honey, and did everything in his power to make me comfortable for the journey. I was entirely dependent on his generosity, for the goods I originally brought from the Cape were all expended by the time I set off from Linyanti to the west coast. I there drew seventy pounds of my salary, paid my men with it, and purchased goods for the return journey to Linyanti. These being now all expended, the Makololo again fitted me out, and sent me on to the east coast. I was thus dependent on their bounty, and that of other Africans, for the means of going from Linyanti to Loanda, and again from Linyanti to the east coast, and I feel deeply grateful to them. Coin would have been of no benefit, for gold and silver are quite unknown.

As this was the point from which we intended to strike off to the northeast, I resolved on the following day to visit the Falls of Victoria, called by the natives Mosioa-tunya, or more anciently Shongwe. Of these we had often heard since we came into the country; indeed, one of the questions asked by Sebituane was, "Have you smoke that sounds in your country?" They did not go near enough to examine them, but, viewing them with awe at a distance, said, in reference to the vapor and noise, "Mosi oa tunya"

(smoke does sound there). It was previously called Shongwe, the meaning of which I could not ascertain. The word for a "pot" resembles this, and it may mean a seething caldron, but I am not certain of it. Being persuaded that Mr. Oswell and myself were the very first Europeans who ever visited the Zambesi in the centre of the country, and that this is the connecting link between the known and unknown portions of that river, I decided to use the same liberty as the Makololo did, and gave the only English name I have affixed to any part of the country.

Sekeletu intended to accompany me, but one canoe only having come instead of the two he had ordered, he resigned it to me. After twenty minutes' sail from Kalai we came in sight, for the first time, of the columns of vapor, appropriately called "smoke," rising at a distance of five or six miles, exactly as when large tracts of grass are burned in Africa. Five columns now arose, and, bending in the direction of the wind, they seemed placed against a low ridge covered with trees; the tops of the columns at this distance appeared to mingle with the clouds. They were white below, and higher up became dark, so as to simulate smoke very closely. The whole scene was extremely beautiful; the banks and islands dotted over the river are adorned with sylvan vegetation of great variety of color and form. At the period of our visit several trees were spangled over with blossoms. Some trees resemble the great spreading oak, others assume the character of our own elms and chestnuts; but no one can imagine the beauty of the view from anything witnessed in England. It had never been seen before by European eyes; but scenes so lovely must have been gazed upon by angels in their flight.

The only want felt is that of mountains in the background. The falls are bounded on three sides by ridges

three hundred or four hundred feet in height, which are covered with forest, with the red soil appearing among the trees. When about half a mile from the falls, I left the canoe by which we had come down thus far, and embarked in a lighter one, with men well acquainted with the rapids, who, by passing down the centre of the stream in the eddies and still places caused by many jutting rocks, brought me to an island situated in the middle of the river, and on the edge of the lip over which the water rolls. In coming hither there was danger of being swept down by the streams which rushed along on each side of the island; but the river was now low, and we sailed where it is totally impossible to go when the water is high.

But, though we had reached the island, and were within a few yards of the spot, a view from which would solve the whole problem, I believe that no one could perceive where the vast body of water went; it seemed to lose itself in the earth, the opposite lip of the fissure into which it disappeared being only eighty feet distant. At least I did not comprehend it until, creeping with awe to the verge, I peered down into a large rent which had been made from bank to bank of the broad Zambesi, and saw that a stream of a thousand yards broad leaped down a hundred feet, and then became suddenly compressed into a space of fifteen or twenty yards.

The entire falls are simply a crack made in a hard basaltic rock from the right to the left bank of the Zambesi, and then prolonged from the left bank away through thirty or forty miles of hills. If one imagines the Thames filled with low, tree-covered hills immediately beyond the tunnel, extending as far as Gravesend, the bed of black basaltic rock instead of London mud, and a fissure made therein from one end of the tunnel to the other down through the keystones of the arch, and prolonged from the left end of

the tunnel through thirty miles of hills, the pathway being one hundred feet down from the bed of the river instead of what it is, with the lips of the fissure from eighty to one hundred feet apart, then fancy the Thames leaping bodily into the gulf, and forced there to change its direction, and flow from the right to the left bank, and then rush boiling and roaring through the hills, he may have some idea of what takes place at this, the most wonderful sight I had witnessed in Africa.

In looking down into the fissure on the right of the island, one sees nothing but a dense white cloud, which, at the time we visited the spot, had two bright rainbows on it. (The sun was on the meridian, and the declination about equal to the latitude of the place.) From this cloud rushed up a great jet of vapor exactly like steam, and it mounted two hundred or three hundred feet high; there condensing, it changed its hue to that of dark smoke, and came back in a constant shower, which soon wetted us to the skin. This shower falls chiefly on the opposite side of the fissure, and a few yards back from the lip there stands a straight hedge of evergreen trees, whose leaves are always wet. From their roots a number of little rills run back into the gulf, but, as they flow down the steep wall there, the column of vapor, in its ascent, licks them up clean off the rock, and away they mount again. They are constantly running down, but never reach the bottom.

On the left of the island we see the water at the bottom, a white rolling mass moving away to the prolongation of the fissure, which branches off near the left bank of the river. A piece of the rock has fallen off a spot on the left of the island, and juts out from the water below, and from it I judged the distance which the water falls to be about one hundred feet. The walls of this gigantic crack are perpendicular, and composed of one homogeneous mass of rock.

On the left side of the island we have a good view of the mass of water which causes one of the columns of vapor to ascend, as it leaps quite clear of the rock, and forms a thick unbroken fleece all the way to the bottom. Its whiteness gave the idea of snow, a sight I had not seen for many a day. As it broke into (if I may use the term) pieces of water, all rushing on in the same direction, each gave off several rays of foam, exactly as bits of steel, when burned in oxygen gas, give off rays of sparks. The snow-white sheet seemed like myriads of small comets rushing on in one direction, each of which left behind its nucleus rays of foam. I never saw the appearance referred to noticed elsewhere. It seemed to be the effect of the mass of water leaping at once clear of the rock, and but slowly breaking up into spray.

I have mentioned that we saw five columns of vapor ascending from this strange abyss. They are evidently formed by the compression suffered by the force of the water's own fall into an unyielding wedge-shaped space. Of the five columns, two on the right and one on the left of the island were the largest, and the streams which formed them seemed each to exceed in size the falls of the Clyde at Stonebyres when that river is in flood. This was the period of low water in the Leeambye; but, as far as I could guess, there was a flow of five or six hundred yards of water, which, at the edge of the fall, seemed at least three feet deep.

The fissure is said by the Makololo to be very much deeper farther to the eastward; there is one part at which the walls are so sloping that people accustomed to it can go down by descending in a sitting position. The Makololo on one occasion, pursuing some fugitive Batoka, saw them, unable to stop the impetus of their flight at the edge, literally dashed to pieces at the bottom. They beheld the

stream like a "white cord" at the bottom, and so far down (probably three hundred feet) that they became giddy, and were fain to go away holding on to the ground. . . .

Sekeletu and his large party having conveyed me thus far, and furnished me with a company of one hundred and fourteen men to carry the tusks to the coast, we bade adieu to the Makololo on the 20th of November, and proceeded northward to the Lekone. The country around is very beautiful, and was once well peopled with Batoka, who possessed enormous herds of cattle. When Sebituane came in former times, with his small but warlike party of Makololo, to this spot, a general rising took place of the Batoka through the whole country, in order to "eat him up;" but his usual success followed him, and, dispersing them, the Makololo obtained so many cattle that they could not take any note of the herds of sheep and goats. The *tsetse* has been brought by buffaloes into some districts where formerly cattle abounded. This obliged us to travel the first few stages by night. We could not well detect the nature of the country in the dim moonlight; the path, however, seemed to lead along the high bank of what may have been the ancient bed of the Zambesi before the fissure was made. The Lekone now winds in it in an opposite direction to that in which the ancient river must have flowed.

For a few days we travelled over an uninhabited, gently undulating, and most beautiful district, the border territory between those who accept and those who reject the sway of the Makololo. The face of the country appears as if in long waves, running north and south. There are no rivers, though water stands in pools in the hollows. We were now come into the country which my people all magnify as a perfect paradise. Sebituane was driven from it by the Matabele. It suited him exactly for cattle, corn, and

health. The soil is dry, and often a reddish sand; there are few trees, but fine large shady ones stand dotted here and there over the country where towns formerly stood. One of the fig family I measured, and found to be forty feet in circumference; the heart had been burned out, and some one had made a lodging in it, for we saw the remains of a bed and a fire. The sight of the open country, with the increased altitude we were attaining, was most refreshing to the spirits. Large game abound. We see in the distance buffaloes, elands, hartebeest, gnus, and elephants, all very tame, as no one disturbs them. Lions, which always accompany other large animals, roared about us, but, as it was moonlight, there was no danger. In the evening, while standing on a mass of granite, one began to roar at me, though it was still light.

On the 3d of December we crossed the river Mozuma, or river of Dila, having travelled through a beautifully undulating pastoral country. To the south, and a little east of this, stands the hill Taba Cheu, or "White Mountain," from a mass of white rock, probably dolomite, on its top. But none of the hills are of any great altitude. The Mozuma, or river of Dila, was the first watercourse which indicated that we were now on the slopes towards the eastern coast. It contained no flowing water, but revealed in its banks what gave me great pleasure at the time,—pieces of lignite, possibly indicating the existence of a mineral, namely, coal, the want of which in the central country I had always deplored. Again and again we came to the ruins of large towns, containing the only hieroglyphics of this country, worn millstones, with the round ball of quartz with which the grinding was effected. Great numbers of these balls were lying about, showing that the depopulation had been the result of war; for, had the people removed in peace, they would have taken the balls with them.

When we had passed the outskirting villages, which alone consider themselves in a state of war with the Makololo, we found the Batoka, or Batonga, as they here call themselves, quite friendly. Great numbers of them came from all the surrounding villages with presents of maize and masuka, and expressed great joy at the first appearance of a white man, and harbinger of peace. The women clothe themselves better than the Balonda, but the men go *in puris naturalibus*. They walk about without the smallest sense of shame.

The farther we advanced, the more we found the country swarming with inhabitants. Great numbers came to see the white man, a sight they had never beheld before. They always brought presents of maize and masuka. Their mode of salutation is quite singular. They throw themselves on their backs on the ground, and, rolling from side to side, slap the outside of their thighs as expressions of thankfulness and welcome, uttering the words "Kina bomba." This method of salutation was to me very disagreeable, and I never could get reconciled to it. I called out, "Stop, stop; I don't want that;" but they, imagining I was dissatisfied, only tumbled about more furiously, and slapped their thighs with greater vigor. . . .

As we approached nearer the Zambesi, the country became covered with broad-leaved bushes, pretty thickly planted, and we had several times to shout to elephants to get out of our way. At an open space, a herd of buffaloes came trotting up to look at our oxen, and it was only by shooting one that I made them retreat. The meat is very much like that of an ox, and this one was very fine. The only danger we actually encountered was from a female elephant, with three young ones of different sizes. Charging through the centre of our extended line, and causing the men to throw down their burdens in a great hurry, she

received a spear for her temerity. I never saw an elephant with more than one calf before. We knew that we were near our Zambesi again, even before the great river burst upon our sight, by the numbers of water-fowl we met. I killed four geese with two shots, and, had I followed the wishes of my men, could have secured a meal of water-fowl for the whole party. I never saw a river with so much animal life around and in it, and, as the Barotse say, "Its fish and fowl are always fat." When our eyes were gladdened by a view of its goodly broad waters, we found it very much larger than it is even above the fall. One might try to make his voice heard across it in vain. Its flow was more rapid than near Sesheke, being often four and a half miles an hour.

AMONG TRAITORS AND BARBARIANS.

SERPA PINTO.

[In 1877, Major Serpa Pinto, a Portuguese officer, who in 1869 had taken part in conflicts with the natives of the Lower Zambesi, was sent by the Central Geographical Commission to conduct a Portuguese expedition across Africa. Entering Africa at Loanda, he crossed the continent in that latitude, and afterwards journeyed southward to Pretoria, in the Boer republic. Some of his most exciting adventures were encountered in the kingdom of the Lui, on the Upper Zambesi, and these we transcribe. Lobossi, the king of the Barôze, Lui, or Ungenge,—three names of one kingdom,—had a prime minister named Gambella, who proved hostile to the white explorer, whose life was threatened. We take up the narrative at this point.]

THE council, in view of the attitude and reasoning of Machauana, resolved that sentence of death should not be passed on me; but, as it would appear, one of its members

came to a contrary decision, on his own account, for that night, having left the camp with the intention of taking the altitudes of the moon, an assegai, cast by some unseen hand, came so near me that the shaft glanced along my left arm. I cast a hasty glance in the direction whence the missile came, and saw, in the dim light, a negro, at twenty paces' distance, preparing for another throw. To draw my revolver and fire at the rascal was an act rather of instinct than of thought. At sight of the flash the fellow turned and fled in the direction of the city, and I pursued him. Finding me at his heels, he threw himself on the ground. This made me cautious, and I approached him very gingerly, prepared again to fire if I saw any evidence of treachery.

I saw, however, that the burly black was lying on his arms, and that his assegais had fallen by his side.

I seized hold of one of his arms, and whilst I felt his flesh tremble at contact with my hand, I also felt a hot liquid running between my fingers. The man was wounded. I made him rise, when, trembling with fear, he uttered certain words which I did not understand. Pointing the revolver at his head, I compelled him to go before me to the camp.

The report of the pistol had been heard there, but had passed unheeded, the firing off a gun or two, in the course of the evening, being a common occurrence. I called for two confidential followers, into whose hands I delivered my prisoner, and then proceeded to examine his wound. The ball had penetrated close to the upper head of the right humerus, near the collar-bone, and not having come out, I presumed that it was fixed in the shoulder-blade. As there was no blood apparent in the respiratory passages, I considered that the lungs had not been touched, and the small stream which ran from the wound convinced me also that

none of the principal arteries had been cut. Under these circumstances, the wound did not assume a very serious aspect, at least for the moment.

Having bound up his hurt, I sent for Caiumbuca, and ordered him to accompany me to the King's house, my young niggers with the prisoner following behind.

Lobossi had returned from his women's quarters, and was conversing with Gambella before retiring for the night. I presented to him the wounded man, and inquired who and what he was. The King appeared to be both alarmed and horrified at seeing me covered with the blood of the assassin, which I had not washed off, when a hurried glance exchanged between the bravo and Gambella revealed to me the true head of the attempted crime. Lobossi immediately ordered the fellow to be removed, and said that he should get little sleep that night, from thinking of the spectacle I presented.

I narrated the occurrence, and Gambella loudly applauded what I had done. His only regret was that I had not killed the wretch outright, and that he would take a terrible vengeance for the act.

The negro was unknown in Lialui [Lobossi's capital city], and the men of Lobossi's body-guard asseverated that they had never seen him. Lobossi begged me to keep the incident a profound secret, assuring me that nothing more of the kind should occur so long as I remained in his dominions.

I returned to the camp, more than ever distrustful of the friendly professions of Gambella.

[At midnight he was visited in his tent by a young negress, Mariana by name, friendly to him, who whispered to him that some of his own trusted men were deceiving and betraying him. The next day Lobossi sent him word that the men he wished to accompany him to the coast were ready. But that night a terrific assault was made on his camp.]

My encampment was very extensive, and spread out more than usual, owing to the Quimbares having taken up their quarters in the huts of the Quimbundos since the latter had left me. The centre was a vast circular space, more than a hundred yards in diameter. On one side was a row of huts, in which my own habitation was situated, having round it a cane-hedge, within whose precincts no one passed except my immediate body-servants.

We had reached the 6th of September. The thermometer during the day had stood persistently at 33° Centigrade, and the heat reflected from the sandy soil had been oppressive.

Night came down serene and fresh, and I, seated at the door of my hut, was thinking of my country, my relatives, and my friends; I was musing also upon the future fate of my enterprise, so seriously threatened in the country where I was at present sojourning; but though sad thoughts would often chase the bright ones from my mind, I lost neither faith nor hope of bringing my undertaking to a successful issue. Still, the event of the night before was a black cloud which I essayed in vain to banish from my memory.

My Quimbares, who had retired within their huts, were chatting round their fires, and I alone, of all my company, was in the open air. Suddenly my attention was caught by a number of bright lights flitting round the encampment.

Unable as I was at the moment to explain the meaning of this strange spectacle, nevertheless my mind misgave me as to its object, and I jumped up and looked out from the cane-fencing which surrounded my dwelling.

Directly I caught a fair view of the field, the whole was revealed to me, and an involuntary cry of horror escaped from my lips. Some hundreds of aborigines surrounded

the encampment, and were throwing burning brands upon the huts, whose only covering was a loose thatch of dry grass. In a minute the flames, incited by a strong east wind, spread in every direction. The Quimbares, in alarm, rushed out from their burning huts, and ran hither and thither like madmen. Augusto and the Benguella men gathered quickly about me. In presence of such imminent peril there fell upon me what I have more than once experienced under similar circumstances, namely, the completest self-possession. My mind became cool and collected, and I felt only the determination to resist and to come out victorious.

I called aloud to my people, half demented at finding themselves begirt by a ring of fire, and succeeded in collecting them together in the space occupying the centre of the camp.

Aided by Augusto and the Benguella men, I dashed into my hut, then in flames, and managed to get out in safety the trunks containing the instruments, my papers, the labor of so many months, and the powder. By that time the whole of the huts were ablaze, but happily the fire could not reach us where we stood. Verissimo was at my side. I turned to him and said, "I can defend myself here for a considerable time; make your way through, where and how you can, and speed to Lialui. There see Lobossi, and tell him that his people are attacking me. See also Machauana, and inform him of my danger."

Verissimo ran towards the burning huts, and I watched him till he disappeared amid the ruins. By that time the assegais were falling thickly round us, and already some of my men had been badly wounded, among others Silva Porto's negro Jamba, whose right eyebrow was pierced by one of the weapons. My Quimbares answered these volleys with rifle-balls, but still the natives came on, and had now

made their way into the encampment, where the huts all lying in ashes offered no effective barrier to their advance. I was standing in the middle of the ground before alluded to, guarding my country's flag, whilst all round me my valiant Quimbares, who had now recovered heart, were firing in good earnest. But were they all there? No. One man was wanting,—one man who before all others should have been at my side, but whom no one had seen,—Caiumbuca, my second in command, had disappeared.

As the fires were going down, I perceived the danger to be most imminent. Our enemies were a hundred to our one.

It was like a glimpse of the infernal regions to behold those stalwart negroes, by the light of the lurid flames, darting hither and thither, screaming in unearthly accents, and ever advancing nearer, beneath the cover of their shields, whilst they brandished in the air and then cast their murderous assegais. It was a fearful struggle, but wherein the breech-loading rifles, by their sustained fire, still kept at bay that horde of howling savages.

Nevertheless, I resolved in my mind that the contest could not long continue thus, for our ammunition was rapidly disappearing. At the outset I had but four thousand charges for the Snider rifles and twenty thousand for the ordinary; but it was not the latter which would save us, and directly our firing should slacken, through the falling off of our rapidly-charged breech-loaders, we should be overwhelmed by the blood-thirsty savages.

Augusto, who fought like an enraged lion, came to me with anguish depicted in his face, as he held up his rifle, which had just burst. I passed the word to my little nigger Pepeca to give him my elephant rifle and cartridge-box. Thus armed, the brave fellow ran to the front, and discharged his piece point-blank against the enemy where

their ranks were thickest. At the instant the infernal shouts of the assailants changed their tone, and, amid screams of fright, they precipitately fled.

It was not till the following day that I learned, through King Lobossi, what had produced this sudden change in the aspect of affairs. It was solely due to the unexpected shots of Augusto.

In the cartridge-box intrusted to him were some balls charged with nitro-glycerin!

The effect of these fearful missiles, which decapitated or otherwise tore in pieces all those subject to their explosion, had produced the timely panic among those ignorant savages, who fancied that they saw in this novel assault an irresistible sorcery. Their unpremeditated employment at such a critical time seemed almost providential.

I saw at once that I was saved. Half an hour afterwards Verissimo appeared with a large force, commanded by Machauana, who had come to my rescue by order of the King. Lobossi sent me word that he was a stranger to the whole affair, and he could only suppose that his people, imagining that it was my intention to attack them in conjunction with the Muzungoes of the east, who were collected under Manuanino [a rival claimant of the throne], had taken the initiative, and fallen upon me of their own accord; but that he would take the most vigorous measures to prevent my suffering further aggression. I explained the matter to myself another way, feeling convinced that, if the assault had not been ordered by him, it was the work of Gambella.

Verissimo, seeing the disasters occasioned by the conflict, asked me what was now to be done, a question I answered in the words of one of the greatest Portuguese of ancient times,—"Bury the dead and look after the living." . . .

At break of day I went to seek the King, and spoke to

him in bitter terms of the events of the preceding night. Before his people, there assembled, I held him responsible for what had occurred, and said aloud that they who had to bemoan the loss of parents and kindred should attribute the blame to him, and him only.

I further said that I should proceed upon my journey without loss of time, and announced my intention of pitching my camp among the mountains, where I could with greater advantage resist any fresh attack.

He used every effort to worm out of me the sorcery I had employed the night before, which had caused the assailants to take such hasty flight; for to sorcery alone he and his subjects attributed the terrible effects caused by the explosive balls accidentally employed by Augusto.

[The adventurer kept his word, removing his camp fifteen miles away, to a point in the forest on the flanks of the mountains of Catongo. Here a new misadventure occurred, the result of the treachery of Caiumbuca. He had directed Augusto to call him at eleven o'clock at night, that he might make an astronomical observation.]

In the middle of the night I awoke at Augusto's summons, and did so very quietly, believing it to be the hour I had appointed; but no sooner had I answered the faithful fellow's call than he said, in a broken voice, "Sir, we are betrayed; all our people have fled, and have stolen everything."

I sprang to my feet and hurried out of the hut. True enough, the camp was deserted.

There were Augusto, Verissimo, Camutombo, Catraio, Moêro, and Pepeca, and the wives of the young niggers, all silent,—lost in wonderment,—and eying one another. I gave vent to a burst of bitter laughter. What astonished me, under the circumstances, was to see that Augusto, Verissimo, and Camutombo had stopped behind.

So critical, indeed, had my position become, living in the midst of so much misery and surrounded by so many dangers, that I really could not understand why any of them should care to remain my companion and partake of my lot, where stronger men and more energetic spirits had fled from their disinclination to do so.

I sat down, with my eight faithful ones around me, and began making inquiries about what had occurred. But I sought in vain for details, which none could give me. The men had all fled, without one of those who were left behind having been a witness of the desertion. The dogs, to which they were all known, uttered no warning bark. Pepeca, who had been the round of the huts, had found them all empty.

The few loads which had been deposited at the door of my own hut, and which consisted of powder and cartridges, had also disappeared. This was the deepest wrong they could inflict upon me. All that they had left were the contents of my scanty dwelling. These were my papers, my instruments, and my arms, but arms that were now valueless, for one of the stolen loads contained my cartridges, and without them the former were of no account.

Without delay I made an inventory of my miserable belongings, and found I had thirty charges with steel balls for the Lepage rifle, and twenty-five cartridges with large shot for the Devisme musket, which were but of little use. And those were all my heavy weapons.

I could not but bow my head before this last heavy blow which had been dealt me, and a terrible tightening of the heart awaked, for the first time since I set foot in Africa, the presentiment that I was lost! I was in the centre of Africa, in the midst of the forest, without resources, possessing some thirty bullets at most, when to the sole chance

of bringing down game I had to look for food, when in fact game only could save our lives, and when I had as supporters but three men, three lads, and two women.

Augusto accused himself again and again for having slept, when I had told him to keep watch, and in his rage would, at a word from me, have followed the fugitives and essayed to carry out his threat of killing them all. I had some difficulty to restrain the fury of my faithful negro, and scarcely conscious of what I said, certainly without my words carrying any conviction to my own mind, I ordered them to retire to rest, to fear nothing, and that I would find a remedy for the evil. Meanwhile, I would keep watch.

When they were all gone and I was left to myself, I sat down by my fire with my senses dazed and my limbs nerveless. The moral shock reacted on my body, already considerably shattered by constant fever. With my arms on my knees and my head buried in my hands, I watched the wood as it blazed, without a single thought or idea assuming a definite shape in my mind. I was, in fact, in a state bordering on imbecility. Nevertheless instinct, the child of habit, soon made me conscious that I was unarmed, and I aroused myself sufficiently to call Pepeca and bid him bring me my gun. He came, delivered me the weapon, which, almost unknowingly, I laid across my knees, and again retired.

[What followed Pinto describes at length, with dramatic vividness, but it must here be condensed. As he sat looking at the rifle, it occurred to him that it was the one given him by the King of Portugal at the outset of his enterprise. The sight of it recalled some important facts to his mind. The leather case which accompanied it contained the instruments for casting bullets and charging cartridges, together with a box of percussion-caps. His net had leaden weights, suitable for making bullets. And finally, in his trunk, he had two tin boxes of

powder, which had been used to keep his sextant box in place. From these materials, during the succeeding day, he succeeded in making two hundred and thirty-five cartridges. In a few days afterwards he succeeded in inducing the King to furnish him men and canoes, and started on his journey down the Zambesi, with the hope that, by husbanding his cartridges, they might last him until a civilized region was reached. It will suffice here to say that this was safely effected, and we shall end our extracts with his description of an important cataract on the Upper Zambesi.]

That night my sleep was broken by the roar of the cataract of Gonha, which, below the rapids of the Situmba, interrupts the navigation of the Zambesi.

On the 4th at early morning, after partaking of an enormous dish of ground-nuts, a present from the chief of the hamlets, I took a guide and set off for the cataract. The arm of the Liambai, whose left bank I skirted, runs first to the southeast, then bends towards the west, and finally runs perfectly east and west, and in that position receives two other branches of the river, which form three islands covered with splendid vegetation. At the site where the river begins to bend westward there is a fall in the ground of three yards in one hundred and twenty, forming the Situmba rapids. After the junction of the three branches of the Zambesi, it assumes a width of not more than six hundred and fifty-six yards, where it throws out a small arm to the southwest of trifling depth and volume. The rest of the waters as they speed onward meet with a transverse cutting of basalt, with a rapid drop in the level of forty-nine feet, over which they precipitate themselves with a frightful roar.

The cutting lies north-northwest and creates three grand falls, a centre and two side ones. Between and over the rocks which separate the three great masses of water tumble innumerable cascades, producing a marvellous effect.

On the north a third branch of the river continues running on the same upper level as the cataract, and then disembogues into the main artery in five exquisitely beautiful cascades, the last of which is four hundred and forty yards below the great fall. There the river bends again to the south-southeast, narrows to fifty yards, and has a current of one hundred and sixty-five yards per minute.

The different points of view whence one can take in the entire space of the falls render the scene more and more surprising, and never had I before beheld, in the various countries I had visited, a more completely beautiful spectacle.

Gonha does not possess perhaps the imposing character proper to great cataracts; for all about it the landscape is soft, varied, and attractive. The forest vegetation is so mixed up and blended with the rock and water, that the result is one harmonious whole, as if the hand of a great artist had studied the aspect which each feature should assume.

Nor does the fall of the water into the vast abyss cause that deafening noise which is generally so painful; the copious vegetation which surrounds it doubtless helps, when at a very short distance, to muffle the roar.

No vapors arise from the depths to be converted into rain and make a near approach so dank and disagreeable; the falls allow of free access on every side, as if nature had taken delight in allowing one of her loveliest works to be gazed upon at leisure. Gonha is like a magnificent casket which is visible to all who approach it, and which displays its exquisite workmanship for all the world to wonder at and admire.

MISSIONARY LIFE AMONG THE HOTTENTOTS.

ROBERT MOFFAT.

[Rev. Robert Moffat, a Scottish missionary, born in Edinburgh in 1795, began his missionary labors in South Africa in 1817. He spent more than twenty years in this work, and in 1842 described his experiences in "Missionary Labors and Scenes in Southern Africa." His daughter married the famous explorer, Dr. David Livingstone. He died in 1883. Mr. Moffat gives much interesting information concerning the inhabitants of the country north of Cape Colony. Great Namaqua Land, lying north of the Orange River, in the western coast region of Africa, was the scene of his labors. This country, inhabited by a tribe of Hottentots, had among its chiefs a warrior named Africaner, who was the terror of the colonists, by whom he had been badly treated. Shortly before Mr. Moffat's appearance on the scene, this warrior had been visited by a missionary named Ebner and induced to accept baptism, with a number of his people. Mr. Moffat met Mr. Ebner, heard of his success, and determined to leave Cape Colony for Africaner's territory. We extract his account of this enterprise.]

As I approached the boundaries of the colony it was evident to me that the farmers, who, of course, had not one good word to say of Africaner, were sceptical to the last degree about his reported conversion, and most unceremoniously predicted my destruction. One said he would set me up as a mark for his boys to shoot at; another that he would strip off my skin and make a drum of it to dance to; and another most consoling prediction was that he would make a drinking-cup of my skull. I believe they were serious, and especially a kind, motherly lady, who, wiping the tears from her eyes, bade me farewell, saying, "Had you been an old man, it would have been nothing, for you must soon have died, whether or no; but you are young, and going to become a prey to that monster."

[Such a fate was not reserved for the daring missionary. The people were reserved, but the chief received him kindly.]

Christian Africaner made his appearance, and, after the usual salutation, inquired if I was the missionary appointed by the directors in London; to which I replied in the affirmative. This seemed to afford him much pleasure, and he added that, as I was young, he hoped that I would live long with him and his people. He then ordered a number of women to come; I was rather puzzled to know what he intended by sending for women, till they arrived, bearing bundles of native mats and long sticks, like fishing-rods. Africaner, pointing to a spot of ground, said, "There you must build a house for the missionary."

A circle was instantly formed, and the women, evidently delighted with the job, fixed the poles, tied them down in the hemispheric form, and covered them with the mats, all ready for habitation, in the course of little more than half an hour. Since that time I have seen houses built of all descriptions, and assisted in the construction of a good many myself; but I confess I never witnessed such expedition. Hottentot houses (for such they may be called, being confined to the different tribes of that nation) are at best not very comfortable.

I lived nearly six months in this native hut, which very frequently required tightening and fastening after a storm. When the sun shone, it was unbearably hot; when the rain fell, I came in for a share of it; when the wind blew I had frequently to decamp to escape the dust; and in addition to these little inconveniences, any hungry cur of a dog that wished a night's lodging would force itself through the frail wall, and not unfrequently deprive me of my meal for the coming day; and I have more than once found a serpent coiled up in a corner. Nor were these all

the contingencies of such a dwelling, for, as the cattle belonging to the village had no fold, I have been compelled to start up from a sound sleep, and try to defend myself and my dwelling from being crushed to pieces by the rage of two bulls which had met to fight a nocturnal duel.

[Africaner seemed to be a thorough convert to Christianity, becoming a constant reader of the Bible, and assisting earnestly in the labors of the mission.]

During the whole period I lived there I do not remember having occasion to be grieved with him, or to complain of any part of his conduct; his very faults seemed to "lean to virtue's side." One day, when seated together, I happened, in absence of mind, to be gazing steadfastly on him. It arrested his attention, and he modestly inquired the cause. I replied, "I was trying to picture to myself your carrying fire and sword through the country, and I could not think how eyes like yours could smile at human woe!" He answered not, but shed a flood of tears! He zealously seconded my efforts to improve the people in cleanliness and industry, and it would have made any one smile to have seen Africaner and myself superintending the school children, now about a hundred and twenty, washing themselves at the fountain.

[After several months of this life, Mr. Moffat found it necessary that he should visit Cape Town, and, with some difficulty, persuaded Africaner to accompany him. It was agreed that the chief should go in disguise, as one of Mr. Moffat's servants. As they proceeded, the people often denounced the savage, and wondered how the missionary had escaped his clutches,—much to the amusement of the listening chief. At one farm the following interesting scene took place.]

On approaching the place, which was on an eminence, I directed my men to take the wagon to the valley below, while I walked towards the house. The farmer, seeing a

stranger, came slowly down the descent to meet me. When within a few yards I addressed him in the usual way, and stretching out my hand, expressed my pleasure at seeing him again. He put his hand behind him, and asked me, rather wildly, who I was. I replied that I was Moffat, expressing my wonder that he should have forgotten me. "Moffat!" he rejoined, in a faltering voice; "it is your *ghost!*" and moved some steps backward. "I am no ghost," I said. "Don't come near me!" he exclaimed; "you have been long murdered by Africaner." "But *I am* no ghost," I said, feeling my hands, as if to convince him, and myself, too, of my materiality; but his alarm only increased. "Everybody says you were murdered, and a man told me he had seen your bones;" and he continued to gaze at me, to the no small astonishment of the good wife and children, who were standing at the door, as also to that of my own people, who were looking on from the wagon below. At length he extended his trembling hand, saying, "When did you rise from the dead?"

As he feared my presence would alarm his wife, we bent our steps towards the wagon, and Africaner was the subject of our conversation. I gave him in a few words my views of his present character, saying, "He is now a truly good man;" to which he replied, "I can believe almost anything you say, but *that* I cannot credit." By this time we were standing with Africaner at our feet; on his countenance sat a smile, he well knowing the prejudices of some of the farmers. The man closed the conversation by saying, with much earnestness, "Well, if what you assert be true respecting that man, I have only one wish, and that is to see him before I die; and when you return, as sure as the sun is over our heads, I will go with you to see him, though he killed my own uncle."

I was not before aware of this fact, and now felt some hesitation whether to discover to him the object of his wonder; but knowing the sincerity of the farmer and the goodness of his disposition, I said, "This, then, is Africaner." He started back, looking intensely at the man as if he had just dropped from the clouds. "Are you Africaner?" he exclaimed. The chief arose, doffed his old hat, and, making a polite bow, answered, "I am." The farmer seemed thunder-struck; but when, by a few questions, he had assured himself of the fact that the former bugbear of the border stood before him, now meek and lamb-like in his whole deportment, he lifted up his eyes and exclaimed, "O God, what a miracle of thy power! what cannot thy grace accomplish!" The kind farmer and his no less hospitable wife now abundantly supplied our wants; but we hastened our departure, lest the intelligence might get abroad that Africaner was with me, and bring unpleasant visitors.

[The dreaded chief was well received at Cape Town, his conversion being considered an extraordinary result of missionary enterprise. His New Testament, which was almost worn out by constant use, was a highly interesting object to the settlers. He returned without interference, and with valuable presents. Mr. Moffat, however, had less success with many of the people than with the chief, finding them difficult to convince. He tells the following story:]

A wily rain-maker, who was the oracle of the village in which he dwelt, once remarked, after hearing me enlarge on the subject of creation, "If you verily believe that that Being created all men, then, according to reason, you must also believe that in making white people he has improved on his work. He tried his hand on Bushmen first, and he did not like them, because they were so ugly, and their language like that of the frogs. He then tried his hand

on the Hottentots, but these did not please him either. He then exercised his power and skill, and made the Bechuanas, which was a great improvement; and at last he made the white people; therefore," exulting, with an air of triumph at the discovery, "the white people are so much wiser than we are in making walking houses (wagons), teaching the oxen to draw them over hill and dale, and instructing them also to plough the gardens, instead of making their wives do it, like the Bechuanas." His discovery received the applause of the people, while the poor missionary's arguments, drawn from the source of Divine truth, were thrown into the shade.

With all their concessions, they would with little ceremony pronounce our customs clumsy, awkward, and troublesome. They could not account for our putting our legs, feet, and arms into bags, and using buttons for the purpose of fastening bandages around our bodies, instead of suspending them as ornaments from the neck or hair of the head. Washing the body, instead of lubricating it with grease and red ochre, was a disgusting custom, and cleanliness about our food, house, and bedding contributed to their amusement in no small degree.

A native, roasting a piece of fat zebra flesh for me on the coals, was told that he had better turn it with a stick or fork, instead of his hands, which he invariably rubbed on his dirty body for the sake of the precious fat. This suggestion made him and his companions laugh extravagantly, and they were wont to repeat it as an interesting joke wherever they came.

[As to the methods of the rain-makers, the following account is interesting:]

Years of drought had been severely felt, and the natives, tenacious of their faith in the potency of a man, held a

council and passed resolutions to send for a rain-maker of renown from the Bahurusti tribe, two hundred miles northeast of the Kuruman station. Rain-makers have always most honor among a strange people, and therefore they are generally foreigners. The heavens had been as brass; scarcely a cloud had been seen for months, even on the distant horizon. Suddenly a shout was raised, and the whole town was in motion: the rain-maker was approaching. Every voice was raised to the highest pitch with acclamations of enthusiastic joy. He had sent a harbinger to announce his approach, with peremptory orders for all the inhabitants to wash their feet. Every one seemed to fly in swiftest obedience to the adjoining river. Noble and ignoble, even the girl who attended to our kitchen fire, ran; old and young ran; all the world could not have stopped them. By this time the clouds began to gather, and a crowd went out to welcome the mighty man, who, as they imagined, was now collecting in the heavens his stores of rain.

Just as he was descending the height into the town, the immense concourse danced and shouted so that the very earth rang, and at the same time the lightnings darted and the thunders roared in awful grandeur. A few heavy drops fell, which produced the most thrilling ecstasy in the deluded multitude, whose shoutings baffled all description. Faith hung upon the lips of the impostor, while he proclaimed aloud that this year the women must cultivate gardens on the hills and not in the valleys, for the latter would be deluged. After the din had somewhat subsided, a few individuals came to our dwellings to treat us and our doctrines with derision. "Where is your God?" one asked, with a sneer. We were silent, because the wicked were before us. "Have you not seen our Morimo? Have you not beheld him cast from his arm the fiery spears, and

rend the heavens? Have you not heard with your ears his voice in the clouds?" adding, with an interjection of supreme disgust, "You talk of Jehovah and Jesus; what can they do?" Never in my life do I remember a text being brought home with such power as the words of the Psalmist, "Be still, and know that I am God: I will be exalted among the heathen."

The rain-maker found the clouds in our country rather harder to manage than those he had left. He complained that secret rogues were disobeying his proclamations. When urged to make repeated trials, he would reply, "You only give me sheep and goats to kill, therefore I can only make goat-rain; give me fat slaughter-oxen, and I shall let you see ox-rain." One day, as he was taking a sound sleep, a shower fell, on which one of the principal men entered his house to congratulate him, but to his utter amazement found him totally insensible to what was transpiring. "Halloo! by my father, I thought you were making rain," said the intruder; when the magician, arising from his slumbers and seeing his wife sitting on the floor, shaking a milk-sack in order to obtain a little butter to anoint her hair, he replied, pointing to the operation of churning, "Do you not see my wife churning rain as fast as she can?" This reply gave entire satisfaction, and it presently spread through the length and breadth of the town that the rain-maker had churned the shower out of a milk-sack. The moisture caused by this shower was dried up by a scorching sun; many long weeks followed without a single cloud; and when they did appear, they were sometimes seen, to the great mortification of the conjurer, to discharge their watery treasures at an immense distance.

The rain-maker had recourse to numerous expedients and stratagems, and continued his performances for many

weeks. All his efforts, however, proving unsuccessful, he kept himself very secluded for a fortnight, and, after cogitating how he could make his own cause good, he appeared in the public fold and proclaimed that he had discovered the cause of the drought. All were now eagerly listening; he dilated some time, until he had raised their expectation to the highest pitch, when he revealed the mystery. "Do you not see, when clouds come over us, that Hamilton and Moffat look at them?" This question receiving a hearty and unanimous affirmation, he added that our white faces frightened away the clouds. and they need not expect rain so long as we were in the country. This was a home-stroke, and it was an easy matter for us to calculate what the influence of such a charge would be on the public mind.

We were very soon informed of the evil of our conduct, to which we plead guilty, promising that as we were not aware that we were doing wrong, being as anxious as any of them for rain, we would willingly look to our chins or the ground all the day long, if it would serve their purpose. It was rather remarkable, that much as they admired my long black beard, they thought that in this case it was most to blame. However, this season of trial passed over to our great comfort, though it was followed for some time with many indications of suspicion and distrust.

[In October, 1823, Mr. Moffat visited Cape Town with his family, taking the son of the principal chief and another chief with him. Their astonishment at what they saw, and their interpretations thereof, are worth describing.]

It was with some difficulty that they were prevailed upon to go on board one of the ships in the bay; nor would they enter the boat until I had preceded them. They were perfectly astounded, when hoisted on the deck, with the

enormous size of the hull, and the height of the masts; and when they saw a boy mount the rigging, and ascend to the very mast-head, they were speechless with amazement.

Taisho whispered to the young prince, "*A ga si khatla?*" ("Is it not an ape?") When they entered the splendid cabin, and looked into the deep hold, they could scarcely be convinced that the vessel was not resting on the bottom of the ocean. "Do these water-houses (ships) unload like wagon-oxen every night?" they inquired. "Do they graze in the sea to keep them alive?" A ship in full sail approaching the roads, they were asked what they thought of that. "We have no thoughts here; we hope to think again when we get to the shore," was their reply.

[The indication of conversion of a native, Mr. Moffat says, was the beginning to put on clothes and wash the body.]

A man might be seen in a jacket with one sleeve, because the other was not finished, or he lacked material to complete it. Another in a leathern or duffel jacket, with the sleeves of different colors, or of fine printed cotton. Gowns were seen like Joseph's coat of many colors, and dresses of such fantastic shapes as were calculated to excite a smile in the gravest of us.

Our congregation now became a variegated mass, including all descriptions, from the lubricated wild man of the desert to the clean, comfortable, and well-dressed believer. The same spirit diffused itself through all the routine of domestic economy. Formerly a chest, a chair, a candle, or a table were things unknown, and supposed to be only the superfluous accompaniments of beings of another order. Although they never disputed the superiority of our attainments in being able to manufacture those superfluities, they would, however, question our common

sense in taking so much trouble about them. They thought us particularly extravagant in burning fat in the form of candles, instead of rubbing it on our bodies or depositing it in our stomachs.

[They, in time, however, adopted these superfluities in their own habitations, and even burnt candles at night to read by. We shall conclude these extracts with Mr. Moffat's description of a tribe of tree-dwelling natives, whom he encountered on a visit to the land of the Matabele.]

Having travelled one hundred miles, five days after leaving Mosega we came to the first cattle outposts of the Matabele, when we halted by a fine rivulet. My attention was arrested by a beautiful and gigantic tree, standing in a defile leading into an extensive and woody ravine, between a high range of mountains. Seeing some individuals employed on the ground under its shade, and the conical points of what looked like houses in miniature protruding through its evergreen foliage, I proceeded thither, and found that the tree was inhabited by several families of Bakones, the aborigines of the country. I ascended by the notched trunk, and found, to my amazement, no less than seventeen of these aerial abodes, and three others unfinished. On reaching the topmost hut, about thirty feet from the ground, I entered and sat down. Its only furniture was the hay which covered the floor, a spear, a spoon, and a bowlful of locusts.

Not having eaten anything that day, and, from the novelty of my situation, not wishing to return immediately to the wagons, I asked a woman, who sat at the door with a babe at her breast, permission to eat. This she granted with pleasure, and soon brought me more, in a powdered state. Several more females came from the neighboring roosts, stepping from branch to branch, to see

the stranger, who was as great a curiosity to them as the tree was to him. I then visited the different abodes, which were on several principal branches. The structure of these houses was very simple. An oblong scaffold, about seven feet wide, is formed of straight sticks; on one end of this platform a small cone is formed, also of straight sticks, and thatched with grass. A person can nearly stand upright in it; the diameter of the floor is about six feet. The house stands on the end of the oblong, so as to leave a little square space before the door.

On the day previous I had passed several villages, some containing forty houses, all built on poles about seven or eight feet from the ground, in the form of a circle; the ascent and descent are by a knotty branch of a tree placed in front of the house. In the centre of the circle there is always a heap of the bones of the game they have killed. Such were the domiciles of the impoverished thousands of the aborigines of the country, who, having been scattered and peeled by Mosilikatse, had neither herd nor stall, but subsisted on locusts, roots, and the chase. They adopted this mode of architecture to escape the lions which abound in that country. During the day the families descended to the shade beneath to dress their daily food. When the inhabitants increased they supported the augmented weight on the branches by upright sticks, but when lightened of their load they removed these for firewood.

ADVENTURES WITH ANIMALS.

DAVID LIVINGSTONE.

[As some description of animal life in South Africa, and the methods of the natives in dealing with wild animals, may be of interest, we extract from the works of Dr. Livingstone a series of disconnected descriptions, giving various details of adventure and incident in his experience of the animals of that region. Our first extract records an adventure with a lion, which came very near to making an end of the explorer and his experiences together.]

IT is well known that if one of a troop of lions is killed, the others take the hint and leave that part of the country. So, the next time the herds were attacked, I went with the people, in order to encourage them to rid themselves of the annoyance by destroying one of the marauders. We found the lions on a small hill about a quarter of a mile in length and covered with trees. A circle of men was formed round it, and they gradually closed up, ascending pretty near to each other. Being down below on the plain with a native schoolmaster, named Mebálwe, a most excellent man, I saw one of the lions sitting on a piece of rock within the now closed circle of men. Mebálwe fired at him before I could, and the ball struck the rock on which the animal was sitting. He bit at the spot struck, as a dog does at a stick or stone thrown at him; then leaping away, broke through the opening circle and escaped unhurt. The men were afraid to attack him, perhaps on account of their belief in witchcraft.

When the circle was re-formed, we saw two other lions in it; but we were afraid to fire lest we should strike the men, and they allowed the beasts to burst through also.

If the Bakatla had acted according to the custom of the country, they would have speared the lions in their attempt to get out. Seeing we could not get them to kill one of the lions, we bent our footsteps towards the village; in going round the end of the hill, however, I saw one of the beasts sitting on a piece of rock as before, but this time he had a little bush in front. Being about thirty yards off, I took a good aim at his body through the bush, and fired both barrels into it. The men then called out, "He is shot, he is shot!" Others cried, "He has been shot by another man too; let us go to him!" I did not see any one else shoot at him, but I saw the lion's tail erected in anger behind the bush, and, turning to the people, said, "Stop a little, till I load again." When in the act of ramming down the bullets, I heard a shout. Starting, and looking half round, I saw the lion just in the act of springing upon me. I was upon a little height; he caught my shoulder as he sprang, and we both came to the ground below together.

Growling horribly close to my ear, he shook me as a terrier dog does a rat. The shock produced a stupor similar to that which seems to be felt by a mouse after the first shake of the cat. It caused a sort of dreaminess, in which there was no sense of pain nor feeling of terror, though quite conscious of all that was happening. It was like what patients partially under the influence of chloroform describe, who see all the operation, but feel not the knife. This singular condition was not the result of any mental process. The shake annihilated fear, and allowed no sense of horror in looking round at the beast. This peculiar state is probably produced in all animals killed by the carnivora; and if so, is a merciful provision by our benevolent Creator for lessening the pain of death.

Turning round to relieve myself of the weight, as he had one paw on the back of my head, I saw his eyes directed

to Mebálwe, who was trying to shoot him at a distance of ten or fifteen yards. His gun, a flint one, missed fire in both barrels; the lion immediately left me, and, attacking Mebálwe, bit his thigh. Another man, whose life I had saved before, after he had been tossed by a buffalo, attempted to spear the lion while he was biting Mebálwe. He left Mebálwe and caught this man by the shoulder, but at that moment the bullets he had received took effect, and he fell down dead. The whole was the work of a few moments, and must have been his paroxysm of dying rage. In order to take out the charm from him, the Bakatla on the following day made a huge bonfire over the carcass, which was declared to be that of the largest lion they had ever seen. Besides crunching the bone into splinters, he left eleven teeth wounds on the upper part of my arm.

A wound from this animal's tooth resembles a gun-shot wound; it is generally followed by a great deal of sloughing and discharge, and pains are felt in the part periodically ever afterwards. I had on a tartan jacket on the occasion, and I believe that it wiped off all the virus from the teeth that pierced the flesh, for my two companions in this affray have both suffered from the peculiar pains, while I have escaped with only the inconvenience of a false joint in my limb. The man whose shoulder was wounded showed me his wound actually burst forth afresh on the same month of the following year. This curious point deserves the attention of inquirers.

[The *tsetse*, which is such a dangerous scourge to the cattle, is thus described:]

It is not much larger than the common house-fly, and is nearly of the same brown color as the common honey-bee; the after part of the body has three or four yellow bars across it; the wings project beyond this part considerably,

HUNTER AND ELEPHANT

and it is remarkably alert, avoiding most dexterously all attempts to capture it with the hand at common temperatures; in the cool of the mornings and evenings it is less agile. Its peculiar buzz when once heard can never be forgotten by the traveller whose means of locomotion are domestic animals; for it is well known that the bite of this poisonous insect is certain death to the ox, horse, and dog. In this journey, though we were not aware of any great number having at any time lighted on our cattle, we lost forty-three fine oxen by its bite. We watched the animals carefully, and believe that not a score of flies were ever upon them.

A most remarkable feature in the bite of the *tsetse* is its perfect harmlessness in man and wild animals, and even calves, so long as they continue to suck the cows. We never experienced the slightest injury from them ourselves, personally, although we lived two months in their habitat, which was in this case as sharply defined as in many others, for the south bank of the Chobe was infested by them, and the northern bank, where our cattle were placed, only fifty yards distant, contained not a single specimen. This was the more remarkable, as we often saw natives carrying over raw meat to the opposite bank with many *tsetse* settled upon it.

The mule, ass, and goat enjoy the same immunity from the *tsetse* as man and the game. Many large tribes on the Zambesi can keep no domestic animals except the goat, in consequence of the scourge existing in their country. Our children were frequently bitten, yet suffered no harm; and we saw around us numbers of zebras, buffaloes, pigs, pallahs, and other antelopes, feeding quietly in the very habitat of the *tsetse*, yet as undisturbed by its bite as oxen are when they first receive the fatal poison. There is not so much difference in the natures of the horse and zebra, the buffalo

and ox, the sheep and antelope, as to afford any satisfactory explanation of the phenomenon. Is a man not as much a domestic animal as a dog? The curious feature in the case, that dogs perish though fed on milk, whereas the calves escape so long as they continue sucking, made us imagine that the mischief might be produced by some plant in the locality, and not by *tsetse;* but Major Vardon, of the Madras army, settled that point by riding a horse up to a small hill infested by the insect without allowing him time to graze, and though he only remained long enough to take a view of the country, yet in ten days afterwards the horse was dead.

[The habits of the land-tortoise and of the ostrich next enlist our attention.]

Occasionally we lighted upon land tortoises, which, with their unlaid eggs, make a very agreeable dish. We saw many of their trails leading to the salt fountain; they must have come great distances for this health-giving article. In lieu thereof they often devour wood-ashes. It is wonderful how this reptile holds its place in the country. When seen, it never escapes. The young are taken for the sake of their shells; these are made into boxes, which, filled with sweet-smelling roots, the women hang around their persons. When older it is used as food, and the shell converted into a rude basin to hold food or water. It owes its continuance neither to speed nor cunning. Its color, yellow and dark brown, is well adapted, by its similarity to the surrounding grass and brushwood, to render it indistinguishable; and, though it makes an awkward attempt to run on the approach of man, its trust is in its bony covering, from which even the teeth of a hyena glance off foiled. When this long-lived creature is about to deposit her eggs, she lets herself into the ground by throwing the

earth up round her shell, until only the top is visible; then covering up the eggs, she leaves them until the rains begin to fall and the fresh herbage appears; the young ones then come out, their shells still quite soft, and, unattended by their dam, begin the world for themselves. Their food is tender grass and a plant named thotona, and they frequently resort to heaps of ashes and places containing efflorescence of the nitrates for the salts these contain. . . .

The ostrich is generally seen quietly feeding on some spot where no one can approach him without being detected by his wary eye. As the wagon moves along far to the windward he thinks it is intending to circumvent him, so he rushes up a mile or so from the leeward, and so near to the front oxen that one sometimes gets a shot at the silly bird. When he begins to run all the game in sight follow his example. I have seen this folly taken advantage of when he was feeding quietly in a valley open at both ends. A number of men would commence running, as if to cut off his retreat from the end through which the wind came; and although he had the whole country hundreds of miles before him by going to the other end, on he madly rushed to get past the men, and so was speared. He never swerves from the course he once adopts, but only increases his speed.

When the ostrich is feeding, his pace is from twenty to twenty-two inches; when walking, but not feeding, it is twenty-six inches; and when terrified, as in the case noticed, it is from eleven and a half to thirteen and even fourteen feet in length. Only in one case was I at all satisfied of being able to count the rate of speed by a stop-watch, and, if I am not mistaken, there were thirty in ten seconds; generally one's eye can no more follow the legs than it can the spokes of a carriage-wheel in rapid motion. If we take the above number, and twelve feet stride as the

average pace, we have a speed of twenty-six miles an hour. It cannot be very much above that, and is therefore slower than a railway locomotive. They are sometimes shot by the horseman making a cross cut to their undeviating course, but few Englishmen ever succeed in killing them.

The ostrich begins to lay her eggs before she has fixed on a spot for a nest, which is only a hollow a few inches deep in the sand, and about a yard in diameter. Solitary eggs, named by the Bechuanas *lesetla*, are thus found lying forsaken all over the country, and become a prey to the jackal. She seems averse to risking a spot for a nest, and often lays her eggs in that of another ostrich, so that as many as forty-five have been found in one nest. Some eggs contain small concretions of the matter which forms the shell, as occurs also in the egg of the common fowl: this has given rise to the idea of stones in the eggs. Both male and female assist in the incubations; but the numbers of females being always greatest, it is probable that cases occur in which the females have the entire charge. Several eggs lie out of the nest, and are thought to be intended as food for the first of the newly-hatched brood till the rest come out and enable the whole to start in quest of food. I have several times seen newly-hatched young in charge of the cock, who made a very good attempt at appearing lame in the plover fashion, in order to draw off the attention of pursuers. The young squat down and remain immovable when too small to run far, but attain a wonderful degree of speed when about the size of common fowls. It cannot be asserted that ostriches are polygamous, though they often appear to be so. When caught they are easily tamed, but are of no use in their domesticated state.

The egg is possessed of very great vital power. One kept in a room during more than three months, in a temperature about 60°, when broken, was found to have a partially-

developed live chick in it. The Bushmen carefully avoid touching the eggs, or leaving marks of human feet near them, when they find a nest. They go up the wind to the spot, and with a long stick remove some of them occasionally, and, by preventing any suspicion, keep the hen laying on for months, as we do with fowls. The eggs have a strong, disagreeable flavor, which only the keen appetite of the desert can reconcile one to. The Hottentots use their trousers to carry home the twenty or twenty-five eggs usually found in a nest; and it has happened that an Englishman intending to imitate this knowing dodge, comes to the wagons with blistered legs, and after great toil, finds all the eggs uneatable, from having been some time sat upon.

[The following evidence of the faithfulness and intelligence of the Africans is of interest, as contrasted with many statements to the contrary.]

The grass here was so tall that the oxen became uneasy, and one night the sight of a hyena made them rush away into the forest to the east of us. On rising on the morning of the 19th, I found that my Bakwain lad had run away with them. This I have often seen with persons of this tribe, even when the cattle are startled by a lion. Away go the young men in company with them, and dash through bush and brake for miles, till they think the panic is a little subsided; they then commence whistling to the cattle in the manner they do when milking the cows: having calmed them, they remain as a guard till the morning. The men generally return with their shins well peeled by the thorns. Each comrade of the Mopato would expect his fellow to act thus, without looking for any other reward than the brief praise of the chief. Our lad, Kibopechoe, had gone after the oxen, but had lost them in the rush through the

flat, trackless forest. He remained on their trail all the next day and all the next night. On Sunday morning, as I was setting off in search of him, I found him near the wagon. He had found the oxen late in the afternoon of Saturday, and had been obliged to stand by them all night. It was wonderful how he managed without a compass, and in such a country, to find his way home at all, bringing about forty oxen with him. . . .

We wished to avoid the *tsetse* of our former path, so kept a course on the magnetic meridian from Lurilopepe. The necessity of making a new path much increased our toil. We were, however, rewarded in latitude 18° with a sight we had not enjoyed the year before, namely, large patches of grape-bearing vines. There they stood before my eyes; but the sight was so entirely unexpected that I stood some time gazing at the clusters of grapes with which they were loaded, with no more thought of plucking than if I had been beholding them in a dream. The Bushmen know and eat them; but they are not well flavored on account of the great astringency of the seeds, which are in shape and size like split peas. The elephants are fond of the fruit, plant, and root alike.

[We conclude with a description of the method by which the Bushmen kill lions.]

As the water in this pond dried up, we were soon obliged to move again. One of the Bushmen took out his dice, and, after throwing them, said that God told him to go home. He threw again, in order to show me the command, but the opposite result followed; so he remained and was useful, for we lost the oxen again by a lion driving them off to a very great distance. The lions here are not often heard. They seem to have a wholesome dread of the Bushmen, who, when they observe evidence of a lion's

having made a full meal, follow up his spoor so quietly that his slumbers are not disturbed. One discharges a poisoned arrow from a distance of only a few feet, while his companion simultaneously throws his skin cloak on the beast's head. The sudden surprise makes the lion lose his presence of mind, and he bounds away in the greatest confusion and terror. Our friends here showed me the poison which they use on these occasions. It is the entrails of a caterpillar called N'gwa, half an inch long. They squeeze out these, and place them all around the bottom of the barb, and allow the poison to dry in the sun. They are very careful in cleaning their nails after working with it, as a small portion introduced into a scratch acts like morbid matter in dissection-wounds. The agony is so great that the person cuts himself, calls for his mother's breast as if he were returned in idea to his childhood again, or flies from human habitations a raging maniac. The effects on the lion are equally terrible. He is heard moaning in distress, and becomes furious, biting the trees and ground in rage.

As we went north the country became very lovely; many new trees appeared; the grass was green, and often higher than the wagons; the vines festooned the trees, among which appeared the real banian (*Ficus Indica*) with its drop-shoots, and the wild date and palmyra, and several other trees which were new to me; the hollows contained large patches of water. Next came watercourses, now resembling small rivers, twenty yards broad and four feet deep. The farther we went, the broader and deeper these became; their bottoms contained great numbers of deep holes, made by elephants wading in them; in these the oxen floundered desperately, so that our wagon-pole broke, compelling us to work up to the breast in water for three hours and a half; yet I suffered no harm

JOHANNESBURG AND THE TRANSVAAL.

CHARLES MORRIS.

[During the early part of 1896 the Transvaal Republic, which had been brought into prominence by the great gold-bearing lodes discovered there, became of leading interest through the Jameson raid, which for a time threatened to precipitate Great Britain and Germany into a war. Such being the case, it seems advisable to precede a description of this region by a short historical statement concerning the origin and development of the Boer republic.]

THE Dutch came early to South Africa. The site of Cape Town was settled by them at the beginning of the seventeenth century. There they remained undisturbed from without for a century. But in 1795, when the French occupied Holland, the English, in reprisal, took Cape Town, holding it to be then a part of France. It was afterwards restored to Holland, but was taken again by England in 1806, on a fresh outbreak of war with France. At a later date English emigrants began to pour into the country; the Dutch Boers, or farmers, to pour out. English methods were not to their taste, and, harnessing their ox-teams and deserting their farms, they *trecked*, or travelled, to the wilderness of the north, in search of a farming paradise north of the Orange River, the limit of the English colony. Some of them settled in Natal, but the English followed them there and drove them farther afield. Others crossed the river Vaal, and settled in the Kafir district since known as the Transvaal.

The Boers, a sturdy, dull-brained, slow-thinking, pastoral people, dwelling on great farms in patriarchal simplicity, and almost without law save their individual wills, had

two antipathies: first, the savage Kafirs; second, the civilized but meddlesome Englishmen. With the first they were continually hostile, with the second in frequent dispute. England made claims on their new territory, based rather on might than right, but finally withdrew them, and in 1852 acknowledged the independence of the Transvaal, in 1854 that of the Orange Free State.

So things remained till 1874, when war broke out between the English and the Kafirs. About the same time the Transvaal Boers made war on Secocoeni, a Kafir chief. The English whipped the Kafirs; the Kafirs whipped the Dutch. Some of the latter, fearing to be overwhelmed, asked the victorious English for assistance, and offered to turn over their republic, then bankrupt, to England in payment for protection. Sir Theophilus Shepstone, the English commissioner, hastily accepted the offer,—which was an individual, not a national one,—and proclaimed the Transvaal to be an English colony.

In 1879 the well-known Zulu war broke out, one of whose disasters was the death of Prince Napoleon. It ended in the defeat of the Zulus, the capture of their chief Cetywayo, and, finally, in the annexation of Zululand to Great Britain. It was followed by hostility with the Boers, who grew hostile to the English annexation proclaimed four years before. They demanded that their independent government should be restored; and when the English authorities refused to pull down the English flag in Pretoria, the Boer capital, they called a meeting, pulled it down themselves, and hoisted the Transvaal standard in its place. This took place on December 16, 1880.

War followed, and with an unexpected result. The English, so long victorious in South Africa, were beaten by the Boers in every conflict. Disaster followed disaster. A part of the Ninety-fourth Regiment was killed or captured

almost to a man. An English force, coming to the relief of Standerton, their chief stronghold in the Transvaal, was nearly annihilated at Majuba Hill. The Dutch charged up the hill in the face of the enemy, killed, wounded, and captured more than half the six hundred, and lost themselves but one man killed and five wounded. This was growing serious. England accepted mediation. Peace followed. The independence of the Transvaal Republic was acknowledged, so far as its internal affairs were concerned, though the English retained their suzerainty in regard to its foreign policy.

And then came the great gold discoveries, the inpouring of miners,—largely English,—and a decided change in the conditions of the population. In 1881 the Transvaal contained one thousand English inhabitants to each eight thousand Boers. Since then these proportions have been largely reversed, and the foreigners now outnumber the natives more than six to one.

What made this remarkable change? The discovery of gold, that magic talisman which so rapidly peopled the wildernesses of California and Australia, and is now producing a similar result in South Africa. It had been known years before that gold existed in this region, but it was not until 1884 that the rich gold-fields of the Witwatersrand (White Waters Range) were discovered. These are a range of hills running through the Transvaal, and forming the water-shed between the Vaal and Limpopo rivers, and so rich in this precious metal that in 1895 they yielded forty-two millions of dollars, an output nearly the same as those of the United States and Australia.

The result was a very natural one. Foreign miners and adventurers flocked into the land. Johannesburg, the central settlement of the gold-field, grew with abnormal rapidity. "For a new town, named only in 1886," says an

1889 traveller, "there was a surprising manifestation of Old-World liveliness. It almost seemed as though a handful of miners had bought a town ready made, with streets, squares, and public buildings complete; and that some great carrying company had brought it over sea and land and delivered it in a habitable form, with the electric light laid on, the beds made, and the corks drawn for dinner."

The Boers did not like foreigners, and were not in love with enterprise, but they needed money, their government being almost bankrupt. They therefore proclaimed a large area a free gold-field. Love of gold has done the rest. But the South African farmer, though he appreciates English money, is not eager for English neighbors. "Many have received for their farms sums of money they had never dreamed they would possess. But the Boer farmer has little liking for the bustle, stir, and excitement raised around him by speculation and by labor. When he makes a large sum by the sale of his land he does as his fathers did before him: he harnesses up his ox-teams and goes away to some unsettled region to look for land where he may make a quiet home, undisturbed by the commercial spirit of the nineteenth century." The government as well as the people recognized both the advantages and the disadvantages of the new conditions. The miners must not be given the suffrage. If so, there would be a speedy end to the old pastoral quiet of the land. But they might be admitted to taxation, and thus lend their aid to fill the Transvaal coffers. It was a new example of taxation without representation, and naturally there arose bitter feeling. True, the Transvaal law permitted naturalization after two years' residence; but the new-comers did not want to give up their home allegiance; they merely wanted to vote.

As it happened, President Krüger and his council, while

not averse to foreign money, did not want foreign domination. He well knew that if the camel of *uitlander* (outsider) suffrage once got its head inside his tent, its body would follow, and he and his people would have to get out. So, with true Boer phlegm, he sturdily held his own, and let the mutterings of discontent pass unheeded.

Meanwhile, England had surrounded the Transvaal. On every side, except where Portugal touched the republic, England possessed the land; and from the region to the north,—the so-called "Rhodesia,"—on New-Year's day, 1896, Dr. Jameson, the administrator of this province, led a force of men into the Transvaal, with the avowed purpose of putting an end to the strained conditions. What secret purpose he may have had remained unavowed.

For once the bold Jameson had reckoned without his host. The uitlanders who had invited him failed to rise in his aid. The sturdy Boers threw off their phlegm, rose in their wrath, and utterly defeated the invaders, making prisoners of all who remained alive.

Thus stands the situation to-day. What the future may bring forth remains to be seen. It will not be many years before the uitlanders—principally English-speaking—will outnumber their hosts ten to one. Then Johannesburg, at least, is likely to proclaim its independence, whatever may happen to the remainder of Boerdom.

And now, laying aside the pen of the historian, let us take up that of the traveller, enter the Transvaal by one of its railway gates, and see what the country has to show.

The railway—that modern high-road of civilization—has crept from several directions into Johannesburg. Three lines have reached it: one from Cape Town, one from Durban, in Natal, and one from Delagoa Bay, *via* Pretoria. The Cape Town road connects by a branch line with Kim-

berley, in the diamond district, and thus joins the capitals of diamonds and gold.

It is inland from Durban, on the Natal coast, that our journey is to be made. The road is a narrow-gauge single-track one, which twists and winds tortuously as it makes the rapid climb from the Natal lowlands to the elevated interior. At Newcastle, two hundred and sixty-eight miles from Durban, it reaches an elevation of nearly four thousand feet, and brings us into a climate markedly different from that we left a few hours ago.

Beyond Newcastle the road curves and winds in an exaggerated fashion, describing loops, tangents, almost circles, climbing steep grades, passing some rough country *via* a long tunnel, and finally reaching Charlestown, five thousand four hundred feet above the sea, and near the triangular meeting-point of Natal, the Transvaal, and the Orange Free State.

Charlestown station passed, we find ourselves in the Transvaal Republic, and must here let our eyes gather food for our pen. We are now on the broad level of the *veldt*, a vast, gently undulating sea of verdure, treeless, and extending for seemingly unending miles with no rise other than an occasional low hill in the far distance. This is the pasture-land of the great herds of the Boers, the pastoral region which they reached in their exodus from Cape Town, and where they vainly hoped to dwell in patriarchal peace. Unluckily for them the days of the patriarchs have passed away and antediluvian quiet has fled from the earth.

The land, as we rattle onward, seems almost uninhabited, We pass miles without seeing man or house; only the broad pastures, with their browsing herds, appear. The Boer farms are measured in square miles rather than acres. They are rather townships or counties than farms. Miles often lie between house and house. Around these home-

steads, or farmsteads,—low, broad, comfortable-looking structures,—are visible the only trees of the veldt, such few species as the soil will endure. The house with its grove looks like an island in the broad sea of the plain.

Now and then, from the car-windows, travellers are seen. Here are some natives—each with a blanket, a pair of shoes, a kettle of food, and his dusky skin as his sole earthly possessions—on their way to Johannesburg to work for some months in the mines, whence they will return home to revel for other months in native luxury. Now a solid-faced farmer jogs along the wheel-track called a road in his two-wheeled gig drawn by two, or mayhap four, horses. Horses enough are not wanting, if the inclination for display be present. Then we pass the slowly trudging freight vehicles of the veldt, huge, deeply-laden wagons, bearing wool and hides, or merchandise and provisions, and drawn by long teams of sleek oxen, attached by iron chains to the vehicle. A young native generally leads the first yoke by a leather strap tied to their horns. But in the road beside walks the driver, a Boer bearing a huge whip, with a stock twelve feet and a lash twenty feet long. His skill with this unwieldy weapon is usually marvellous. He can make it snap like a succession of pistol-shots in the air, and touch any spot on any ox of his team with a precision that seems incredible. Here and there we pass several of these teams "outspanned"—unharnessed, that is—for rest and feeding, the oxen browsing while their group of drivers are cooking their own more varied meal.

And so on we go, crossing the Vaal River at Standerton on an iron bridge, passing, miles beyond, Heidelberg,—like the former a town of wide streets and straggling, one-storied houses,—and finally reaching the skirts of Johannesburg. In the distance beyond we now catch sight of

the long, gold-haunted ridge of the Witwatersrand, a range of low hills extending east and west forty or fifty miles, along whose foot, as far as sight can reach, appear the buildings and towers of stamping-mills and mining shafts, while to the ear comes from afar the dull boom of the ore-crushing stamps.

Into the metropolis of the Transvaal rolls the train. To the traveller, who has for hours been rolling over the monotonous, lonesome veldt, the change is a striking one as he finds himself on every side surrounded by houses and people, while the smoke of the chimneys and the low roar of the mills suggest an activity in strange contrast to the broad peacefulness of the almost uninhabited plain.

Ten years ago Johannesburg was a new-born mining camp, just given the dignity of a name; while the surface of the Rand was barely scratched by the pickaxe of the prospector. To-day the former is a city that is fast approaching a population of one hundred thousand, while the latter is being riven to its roots in search of the yellow evil which it has so long concealed. This teeming population came from all quarters of the world, but is mainly of English speech, being adventurers from California, Australia, Cape Colony, Great Britain, and all regions wherein the stirring Anglo-Saxon has made his home. Native Africans are also there in numbers, and altogether the town is in striking contrast to staid Pretoria, the Boer capital, and in which the Boer steadfastness is still the prevailing tone.

Johannesburg is spread widely over the bottom and sides of a great valley, and, like all the towns of the Transvaal, is marked by streets of immense width, as yet unpaved. Bordering them are long rows of one-story dwellings, absolutely wanting in display, among which the two- and three-story stores look grandly pretentious. As if in

harmony with the color of the soil, the houses are usually painted a dark red. The streets cross each other at right angles, and are lighted by gas or electricity, while the convenience of the street-car is not wanting in this overgrown mining camp.

As for people, they are present in multitudes, of every shade of color and variety of costume from the black hide of the Kafir to the English full dress. The Grand National Hotel, an outreaching shed of a structure, is the principal hostelry. Its table is good, while the conveniences of billiard-room, reading-room, and bar are not wanting. As regards the opportunity for amusements, it is offered in the form of a brace of theatres, an amphitheatre, a gymnasium, and concert- and music-halls. Civilization, in this form, follows the Anglo-Saxon wherever he goes, and has here not followed him with ease, as will appear when we are told that nearly all the material and furniture of the houses of the city have been brought in ox-wagons from the sea-coast four hundred miles away.

The street scenes of Johannesburg are by no means devoid of interest. Ox-teams and great wagons crowd the squares. They have brought their loads of produce and merchandise, which are generally disposed of at auction. The street-cars are not the only vehicles of travel. There are two-wheeled cabs in numbers, and in addition barouches and victorias, often elegant. Fine saddle-horses help to occupy the streets, and bicycles are by no means wanting.

On the sidewalk fashionably attired ladies, on shopping errands intent, share the footway with Boers and roughly-dressed miners, while natives find a childish delight in peering into the paradise of the shop windows. The Stock Exchange, during business hours, is so full that its excited inmates overflow into the street, and the eager dealing in mining shares is as earnest and passionate as is this form

of legalized gambling in all centres of modern civilization.

Dust is the *bête noire* of Johannesburg. The streets are almost constantly blindingly full of it, the dust-clouds being often so dense that one cannot see across the street. It is a land of frequent thunder-storms also, and lightning often works havoc.

Leaving Johannesburg by rail, we may readily fly to Pretoria, thirty-five miles away. This is a dwarf city as compared with its giant neighbor, but is better and more substantially built, and displays a profusion of foliage very restful to the tired eye. The dwellings are surrounded by large gardens, with flowers and fruit-trees, while the great shady blue gums of the streets cannot but yield delight. The city is lighted by electricity. The great building of the town is the Government House, occupying an entire square in the centre of Pretoria. It is three stories high, and its brick walls are covered outwardly with gray cement. On its central façade appears in gilt letters the Dutch motto "Eendragt maakt Magt" ("In Union there is Strength"). It need scarcely be said, however, that in President Krüger's version this adage does not mean union with Great Britain.

But it is not to see towns that one seeks the Transvaal. The gold lodes are the centre of attraction there, and these it is our task now to seek. The gold-bearing strata here differ materially from those of other lands, consisting of "reefs" of conglomerate rock, in which quartzose pebbles are bedded in disintegrated schists. For nearly fifty miles along this ridge the mining claims extend, and over a district of great width. More than two thousand head of stamps are thundering away night and day, powdering the gold-bearing pebbles, from which, by aid of amalgamation, chlorination, and particularly by the new-discovered process

of the cyanide of potassium bath, the gold is extracted. Some of the shafts have been sunk to a depth of six hundred feet, showing the almost inexhaustible extent of the formation. The ore is not rich,—yielding not more than an ounce of gold to the ton. It would be valueless under old methods of extraction, but under the new system is proving highly profitable.

As for the crushing-mills, there is one near Johannesburg which has one hundred and sixty stamps in operation, and which roars away with an appalling clatter by no means wholesome for the ear-drums. It runs day and night, Sunday included. This one mine and its mills employ a thousand natives and two hundred European operatives.

The gold-bearing reefs extend into the territory of the South Africa Mining Company, the so-called "Rhodesia," popularly named after Cecil I. Rhodes, the South African autocrat. Here, in the former Mashonaland, a wonder appears. Great ruins have been here discovered, of cities of gold-seekers who belonged to remote centuries of the past. The principal ruin is at a place called Zimbabwe, where remain triple walls of hewn granite thirty feet high, while among the ruins are columns, pilasters, and figures of colossal birds. From Zimbabwe remains of a line of fortifications extend for three hundred miles, connecting it with another city and fortress of the past. Tools of the ancient gold-miners are found. This may have been the Ophir of Scriptures. Certainly it was a region from which much of the gold of ancient days came.

If we leave Johannesburg by rail for Cape Town, it is to make a journey of one thousand and thirteen miles in extent. The railway is single track, of three and a half feet gauge. Passing southward, we still find ourselves in the great, rolling, treeless veldt, with few farm-houses and sparse villages. The road is well made, the bridges sub-

stantial, the station buildings attractive. Passing through Bloemfontein, the capital of the Orange Free State, we enter a country of different formation, covered by the low shrub called the karroo bush. Great flocks of sheep and goats are kept here, and some of ostriches.

Entering Cape Colony, the karroo bush continues. Farther south great sheep farms are passed, from three to five thousand acres in extent. Goats are also kept in multitudes, and beyond Beaufort West flocks of ostriches are almost as common as those of sheep. In 1865 this country had eighty domesticated birds, now it has one hundred and fifty thousand. They formerly sold for five hundred dollars each, now a young one may be bought for ten dollars.

From the station of Matjesfontein, three thousand six hundred feet in elevation, the descent to the coast begins. The karroo region is left, and for more than thirty miles the descending grade is very steep, and the road sharp in curves, and costly in tunnels, embankments, and viaducts. At length the lower level is attained, and a rich grass land, with great fields of oats and rye, meets the gratified eye. Farther on we pass a mountain region called the Paarl, with neat farm-houses along its base, and numberless vineyards, this being a great grape-yielding and wine-producing country. Then comes again a great stretch of the karroo, beyond which, its head swathed in clouds, Table Mountain looms. Soon a beach of white sand and the long waves of the Atlantic heave into view, and entering Cape Town the train lands us in a large, handsome station. Our long journey is at an end.

THE AFRICAN DIAMOND-MINES.

EMIL HOLUB.

[Dr. Holub, a noted African traveller, gives us in his "Seven Years in South Africa" a highly interesting account of "travel, researches, and hunting adventures between the diamond-fields and the Zambesi (1872–79)." From this work we select the following description of the condition of the diamond-diggings at that period. The principal change since is in the increased depth of the excavations.]

ALTHOUGH the first diamonds that were found were by the Boers somewhat contemptuously called "pebbles," the discovery stirred up among them a keen desire for the acquisition of territory; and when the annexation of the diamond-fields was subsequently effected by the English, the controversy that was waged between the latter and the government of the Orange Free State was very bitter, both sides claiming to be the rightful possessors by virtue of concessions that had been made to them by one or other of the native chieftains, Waterboer, Yantje, and Gassibone.

As the weakest must always go to the wall, so the Orange Free State, after a brief effort to assert the rights of ownership, was obliged to yield; nevertheless it did not cease to insist upon the justice of its original claim. All attempts of England to arbitrate between the new province and the republic, all efforts to gain recognition for laws that should compass on equal terms the mutual benefit of conflicting states, were altogether unavailing, until at last England herself, either prompted by her own magnanimity, or impelled by some sense of justice, finally purchased the claims of the Free State by a compensation of ninety thousand pounds towards the extension of a rail-

road which should connect the Free State with one of the lines in the eastern portion of Cape Colony.

The whole region of the diamond-fields may be subdivided into three districts. The oldest fields are on the Vaal River, and extend from the town of Bloemhof, in the Transvaal, to the river-diggings at the confluence of the Vaal and the Harts; next to them are the dry-diggings, so called because the "pebbles" were originally obtained by sifting the earth and not by washing it,—these lie around the town of Kimberley; and thirdly, there are the fields at Sagersfontein and Coffeefontein, in the Orange Free State, beyond the English dependency of Griqualand.

The settlement at the river-diggings sprang up with a rapidity as marvellous as those of California. At first, Klipdrift, opposite Pniel, a mission station, was regarded as its capital and centre, but within the last nine years Kimberley (formerly known as New Rush) has become so important that it necessarily holds first rank.

Within a year after the discovery of the "crystal stone" in the valley of the Vaal, where the indolent Korannas alone had dragged on a dreamy existence, long rows of tenements had started up, although for the most part they were unsubstantial huts; but very soon South Africa, from end to end, became infected with the diamond-fever. Young and old, sick and healthy, servants and masters, country-folk and townsmen, sailors and soldiers, deserting their calling, and Dutch Boers, with their whole families, yielded to the impulse to migrate to the alluring scene that had suddenly became so famous. The encampments that they made were transformed with incredible speed into regular towns of four thousand or five thousand inhabitants; and when the intelligence was circulated that the "Star of Africa," a diamond of eighty-three carats and a half, had been picked up, every European steamer

brought over hundreds of adventurers, all eager to take their chance of securing similar good fortune for themselves.

Thus in addition to Klipdrift grew up the towns of Hebron, River Town, Gong Gong, Blue Jacket, New Kierk's Rush, Delportshope, Waldeck's Plant, and others, the glory of many of them, however, being destined to be very transient, some of them passing away as suddenly as they had risen. The report was no sooner spread that on the plain of the Dutoitspan Farm, below the river-diggings on the Vaal, diamonds had been found in abundance on the surface of the earth, than the old stations were forthwith abandoned, every one hurrying off in hot haste to the dry-diggings, which were supposed to be much more prolific.

Out of the large number of those who succeeded in quickly realizing large fortunes, a large proportion squandered their wealth as rapidly as they had acquired it, and as the new settlements soon developed themselves into dens of vice and demoralization, the majority of the population, being mere adventurers, came utterly to grief.

On the Vaal itself the diamonds are collected from the alluvial rubble. This rubble consists of blocks of greenstone, containing fine, almond-shaped chalcedonies and agates, some as large as a man's fist and like milk quartz, others smaller and of a pink or carmine tint, and occasionally blue or yellow. It covers the district between Bloemhof and Hebron, and is known distinctively as Vaal-stone. But, besides greenstone, the rubble includes a number of other elements: it consists partially of fragments of the trap-dyke that is characteristic of the district between Hebron and the mouth of the Harts, as well as nearly all the hills in the east of Cape Colony, in the Orange Free State, and in Griqualand; it contains, likewise, a certain proportion of milk quartz, clay slate, sand yielding mag-

netic iron, and numerous pyropes; these vary in size from that of a grain of millet to that of a grain of maize, and were awhile mistaken for garnets and rubies; moreover, it contains portions of the limestone that extends both ways from the Vaal, though not forming the actual valley of the river: it is a stone in which I never discovered any fossils.

The diggers, after obtaining their portion of diamond rubble from the "claims," as the parcels of ground allotted them by the authorities were called, had first to convey it down to the river; they had next to sift it from the heavier lumps of stone, and then to wash it in cradles, three or four feet long and about one and a half wide, until they had entirely got rid of the clay. In the residuum they had finally to search carefully for the treasure. The stones found in this locality were, as a general rule, very small, but their color was good and their quality fine; they were called "glass-stones," while the larger and more valuable brilliants obtained in the two other districts were distinguished as "true river-stones."

The second, and hitherto the most important, diamond-field is that which I have called the central diggings; they are what formerly were understood by the dry-diggings. They include the four mines in the Kimberley district, and form two separate groups, the northwestern containing Kimberley and Old de Beers adjoining it on the east, and the eastern group, containing Dutoitspan, with Bultfontein closing it on the south and west. This eastern group lies about two miles from Kimberley, and about one mile from Old de Beers. Kimberley itself is about twenty-two miles to the southeast of Klipdrift, and is the most important of the four mines I have mentioned, being that where the greatest numbers of diamonds of all qualities are found. The stones found at Dutoitspan are valued very much on

account of their bright yellow color, those obtained at Bultfontein being generally smaller, but equal in purity to the "river-stones."

Diamond mines vary in depth from forty-five to two hundred feet,* and may be from two hundred to seven hundred yards in diameter. The diggings are locally called "kopjes," being divided into "claims," which are either thirty feet square, or thirty feet long by ten feet wide; of these a digger may hold any number from one to twenty, but he is required to work them all. For the ordinary "claim" the monthly payment generally amounts to about twenty florins for ground-rent and for water-rate, made to the government and a Mining Board, which consists of a committee of diggers appointed to overlook the working of the whole. In Dutoitspan and Bultfontein there is an additional tax paid to the proprietors,—*i.e.*, the owners of the farms; but in the Kimberley and Old de Beers group the government has purchased all rights of possession from the firm of Ebden & Co.

I have little doubt in my own mind that these pits are the openings of mud craters, but I am not of opinion that the four diggings are branches of the same crater; it is only a certain resemblance between the stones found in Old de Beers and those found in Kimberley that affords the least ground for considering that there is any subterranean communication between the two diggings. At the river-diggings I believe that one or more crater-mouths existed in the vicinity of the river-bed above Bloemhof.

The palmy days of the diamond-diggings were in 1870 and 1871, when, if report be true, a swaggering digger would occasionally light his pipe with a five-pound note,

* The Kimberley mine in 1891 was seven hundred feet deep, and is now still deeper.

and when a doctor's assistant was able to clear eleven hundred pounds in seven months. But since 1871 the value of the diamonds has been constantly on the decline; and although the yield has been so largely increased that the aggregate profits have not diminished, yet the actual expenses of working have become tenfold greater. Notwithstanding the fall in the value of the stones, the price of the land has risen immensely. At the first opening of the Kimberley kopje, the ordinary claim of nine hundred square feet could be had for ten pounds. It is true that the purchase only extended to the surface of the soil; but now that the excavations are made to the depth of about two hundred feet, some of the richer pits fetch from twelve thousand to fifteen thousand pounds, a proof that the real prosperity of the diamond-fields has not deteriorated, because (just as in the gold-diggings) the rush of adventurers eager for sudden wealth has been replaced by the application of diligent and systematic industry.

As time has progressed, the mode of obtaining the diamonds has gradually become more skilled and scientific. As the diggers first worked in their allotments with the assistance of what hired laborers they could get, Hottentots, Kafirs, and Bechuanas, their apparatus was of the rudest character. It consisted only of a stake, driven into the ground at the upper edge of the pit, with an iron or wooden pulley attached, enabling them to draw up the buckets of diamond-earth by hand. This acted very well as long as the walls of the mine were perpendicular; but when they were at all on the incline, or when, as would sometimes happen, the earth had to be carried a hundred yards or more over the heads of other workers, one stake was driven in at the bottom of the pit and three at the top, and along this there ran two grooved iron rods, that supported a framework, provided with a hook to which a

bucket could be attached. As the excavations grew deeper, and the diggers became the owners of more than one claim apiece, the expense of raising the larger quantities of earth, and the waste of time, began to be seriously felt, and led to the introduction of wooden whims,—great capstans worked by horse-power. Many of these cumbrous machines are still in use; but the more wealthy diggers, as well as the companies that have recently been formed, now generally employ steam-engines.

This is specially the case at the Kimberley kopje. Although these are the smallest of the diamond mines, they are the richest, and consequently attract the largest proportion of diggers.

It soon became impossible to find space for the separate hand-pulleys to stand side by side, and huge deal scaffolds were erected, three stories high, so that three distinct lifting-apparatus could be worked one above another, without requiring a basement area of much more than six square feet. At present, however, the edge of the embankment is almost entirely covered with horse-whims and steam-engines that have been brought from England.

It is no longer allowable for the diamond-earth to be sorted near the place where it is brought up, a practice that was found to lead to much annoyance and disagreement; but the owners are obliged to subject their earth to scrutiny, either within the limits of their own allotments, or to have it conveyed to a piece of ground hired outside the town for the purpose.

The process of sorting is also more complicated than it used to be. Formerly the earth containing the diamonds was cleared of its coarser parts by means of sieves; it was then turned over and shaken out on to a flat table, where it was merely examined by the help of a stick, or a little piece of iron. It necessarily resulted from this rough-and-

ready method that many diamonds were overlooked, and the earth thus examined was afterwards sold as being very likely to yield a number of small stones, and often proved very remunerative to the buyer.

Now, however, washing machines, some of them very elaborate, worked by steam-power, horse-power, or hand-labor, according to the means of the claim-owners, are almost universally employed. The earth is gradually cleared of clay, until only the stony particles remain; and these are rinsed repeatedly in water until they are thoroughly clean; then they are placed, generally every evening, in sieves for the moisture to drain off, and, after a slight shaking, they are turned on to a table before the claim-owner or overseer. Whatever diamonds there may be are generally detected at first sight; being heavier than other stones, they gravitate to the bottom of the fine-wire sieve, and consequently come uppermost when the contents are turned out for the final inspection.

In proportion as the machinery has become more elaborate and the modes of working more perfect, so have expenses increased, and diamond-digging now requires a considerable capital. This, of course, has tended to clear the work of a large crowd of mere adventurers, and made it a much calmer and more business-like pursuit than it was originally. The authorized rules and regulations for the protection of the diggers and of the merchants have likewise materially improved the condition of both.

As viewed from the edge of the surrounding clay walls, the appearance of one of the great diamond-fields is so peculiar as almost to defy any verbal description. It can only be compared to a huge crater, which, previously to the excavations, was filled to the very brink on which we stand with volcanic eruptions, composed of crumbling diamond-bearing earth, consisting mainly of decomposed

tufa. That crater now stands full of the rectangular "claims," dug out to every variety of depth. Before us are masses of earth piled up like pillars, clustered like towers, or spread out in plateaux; sometimes they seem standing erect as walls, sometimes they descend in steps; here they seem to arrange themselves in terraces, and there they gape asunder as pits; altogether they combine to form a picture of such wild confusion that at dusk or in the pale glimmer of moonshine it would require no great stretch of the imagination to believe them the ruins of some city of the past, that after the lapse of centuries was being brought afresh to light.

But any illusion of this sort is all dispelled as one watches the restless activity of the throngs that people the bottom of the deep dim hollow. The vision of the city of the dead dissolves into the scene of a teeming ant-hill; all is life and eagerness and bustle. The very eye grows confused at the labyrinth of wires stretching out like a giant cobweb over the space below, while the movements of the countless buckets making their transit backward and forward only add to the bewilderment. Meanwhile, to the ear everything is equally trying: there is the hoarse creaking of the windlasses; there is the perpetual hum of the wires; there is the constant thud of the falling masses of earth; there is the unceasing splash of water from the pumps; and these, combined with the shouts and singing of the laborers, so affect the nerves of the spectator that, deafened and giddy, he is glad to retire from the strange and striking scene. . . .

A residence in the diamond-fields undoubtedly has various inconveniences, but nothing is so trying as the atmosphere. Every day during the dry winter season lungs, eyes, and ears are painfully distressed by the storms of dust that impregnate the air with every conceivable kind

of filth, which, penetrating the houses, defiles (if it does not destroy) everything on which it rests. The workers in the diggings, the drivers of wagons, and all whose occupations keep them long in the open air are especially sufferers from this cause.

Nor is the summer much less unpleasant. During the rainy season the country is flooded by the violent downpour; the rain often fills up the shallow track-pan (one of the salt lakes that dry up every year, lying in a depression about half a mile long at the south end of Dutoitspan) in a single day; and as the immediate consequence, the streets of Kimberley become so deluged that the traffic is impeded, and foot-passengers can only with difficulty proceed at all. The new corporation has endeavored to remedy this difficulty by laying down gutters and taking other measures for draining the thoroughfares.

LIFE IN CAPE COLONY AND NATAL.

LADY M. A. BARKER.

[Lady Mary Ann Barker, an English writer, was born in the island of Jamaica, where, in 1852, she married Captain G. R. Stewart, of the Royal Artillery. He died in 1860, and in 1865 she married Frederick Napier Broome, whom she accompanied to New Zealand, her experiences there being given in a book entitled "Station Life in New Zealand." She afterwards resided with her husband at Maritzburg, in Natal, South Africa, her experiences in which country are racily described in her "Life in South Africa." From this work the following selections are made, beginning with her account of Cape Town, where she landed October 16, 1875.]

How pleasant is the process familiarly known as "looking about one," particularly when performed under exception-

ally favorable circumstances! A long and happy day commenced with a stroll through the botanic gardens, parallel with which runs, on one side, a splendid oak avenue just now in all the vivid freshness of its young spring leaves. The gardens are beautifully kept, and are valuable as affording a sort of experimental nursery, in which new plants and trees can be brought up on trial and their adaptability to the soil and climate ascertained. For instance, the first thing that caught my eye was the gigantic trunk of an Australian blue-gum-tree, which had attained to a girth and height not often seen in its own land. The flora of the Cape Colony is exceptionally varied and beautiful, but one peculiarity incidentally alluded to by my charming guide struck me as very noticeable. It is that in this dry climate and porous soil all the efforts of uncultivated nature are devoted to the *stems* of the vegetation: on their sap-retaining power depends the life of the plant; so blossom and leaf, though exquisitely indicated, are fragile and incomplete compared to the solidity and bulbous appearance of the stalk.

Everything is sacrificed to the practical principle of keeping life together, and it is not until these stout-stemmed plants are cultivated and duly sheltered and watered, and can grow, as it were, with confidence, that they are able to do justice to the inherent beauty of pencilled petal and veined leaf. Then the stem contracts to ordinary dimensions, and leaf and blossom expand into things which may well be a joy to the botanist's eye. A thousand times during that shady saunter did I envy my companions their scientific acquaintance with the beautiful green things of earth, and that intimate knowledge of a subject which enhances one's appreciation of its charms as much as bringing a lamp into a darkened picture-gallery. There are the treasures of form and color, but from igno-

rant eyes more than half their charms and wonders are held back.

A few steps beyond the garden stand the library and natural history museum. The former is truly a credit to the Colony. Spacious, handsome, rich in literary treasures, it would bear comparison with similar institutions in far older and wealthier places. But I have often noticed in colonies how much importance is attached to the possession of a good public library, and how fond, as a rule, colonists are of books. In a new settlement other shops may be ill supplied, but there is always a good bookseller's, and all books are to be bought there at pretty nearly the same prices as in England. Here each volume costs precisely the same as it would in London, and it would puzzle ever so greedy a reader to name a book which would not be instantly handed to him.

The museum is well worth a visit of many more hours than we could afford minutes, and, as might be expected, contains numerous specimens of the *Bok* family, whose tapering horns and slender legs are to be seen at every turn of one's head. Models are there also of the largest diamonds, and especially well copied is the famous "Star of South Africa," a magnificent brilliant of purest water, sold here originally for something like twelve thousand pounds, and resold for double that sum three or four years back.

In these few hours I perceive, or think I perceive, a certain soreness, if one may use the word, on the part of the Cape Colonists about the unappreciativeness of the English public towards their produce and possessions. For instance, an enormous quantity of wine is annually exported, which reaches London by a devious route and fetches a high price, as it is fairly entitled to do from its excellence. If that same wine were sent direct to a London

merchant and boldly sold as Cape wine, it is said that the profit on it would be a very different affair. The same prejudice exists against Cape diamonds. Of course, as in other things, a large proportion of inferior stones are forced into the market and serve to give the diamonds that bad name which we all know is so fatal to a dog. But it is only necessary to pretend that a really fine Cape diamond has come from Brazil to insure its fetching a handsome price, and in that way even jewellers themselves have been known to buy and give a good round sum, too, for stones they would otherwise have looked upon with suspicion. Already I have seen a straw-colored diamond from "Du Toit's pan" in the diamond-fields cut in Amsterdam and set in London, which could hold its own for purity, radiance and color against any other stone of the same rare tint, without fear or favor; but of course such gems are not common, and fairly good diamonds cost as much here as in any other part of the world.

The light morning mists from that dampness of yesterday have rolled gradually away as the beautiful sunshine dried the atmosphere, and by mid-day the table-cloth, as the colonists affectionately call the white, fleece-like vapor which so often rests on their pet mountain, has been folded up and laid aside in cloudland for future use. I don't know what picture other people may have made to their own minds of the shape and size of Table Mountain, but it was quite a surprise and the least little bit in the world of a disappointment to me to find that it cuts the sky (and what a beautiful sky it is!) with a perfectly straight and level line. A gentle, undulating foreground broken into ravines, where patches of green *veldts* or fields, clumps of trees and early settlers' houses nestle cosily down, guides the eye half-way up the mountain. There the rounder forms abruptly cease, and great granite cliffs rise, bare and

straight, up to the level line stretching ever so far along. "It is so characteristic," and "You grow to be so fond of that mountain," are observations I have heard made in reply to the carping criticisms of travellers, and already I begin to understand the meaning of the phrases. But you need to see the mountain from various points of view and under different influences of sun and clouds before you can take in its striking and peculiar charms.

On each side of the straight line which is emphatically Table Mountain, but actually forming part of it, is a bold headland of the shape one is usually accustomed to in mountains. The "Devil's Peak" is uncompromising enough for any one's taste, while the "Lion's Head" charms the eye by its bluff form and deep purple fissures. These grand promontories are not, however, half so beloved by Cape Colonists as their own Table Mountain, and it is curious and amusing to notice how the influence of this odd straight ridge, ever before their eyes, has unconsciously guided and influenced their architectural tastes. All the roofs of the houses are straight,—straight as the mountain; a gable is almost unknown, and even the few steeples are dwarfed to an imperceptible departure from the prevailing straight line. The very trees which shade the parade-ground and border the road in places have their tops blown absolutely straight and flat, as though giant shears had trimmed them; but I must confess, in spite of a natural anxiety to carry out my theory, that the violent "sou'easters" are the "straighteners" in their case.

Cape Town is so straggling that it is difficult to form any idea of its real size, but the low houses are neat and the streets are well kept and look quaint and lively enough to my new eyes this morning. There are plenty of people moving about with a sociable, business-like air; lots of different shades of black and brown Malays, with pointed

hats on the men's heads: the women encircle their dusky, smiling faces with a gay cotton handkerchief and throw another of a still brighter hue over their shoulders. When you add to this that they wear a full, flowing, stiffly-starched cotton gown of a third bright color, you can perhaps form some idea of how they enliven the streets. Swarms of children everywhere, romping and laughing and showing their white teeth in broadest of grins. The white children strike me at once as looking marvellously well,—such chubby cheeks, such sturdy fat legs,—and all, black or white, with that amazing air of independence peculiar to baby-colonists. Nobody seems to mind them and nothing seems to harm them. Here are half a dozen tiny boys shouting and laughing at one side of the road, and half a dozen baby-girls at the other (they all seem to play separately): they are all driving each other, for "horses" is the one game here. By the side of a pond sit two toddles of about three years old, in one garment apiece and pointed hats: they are very busy with string and a pin; but who is taking care of them and why don't they tumble in? They are as fat as ortolans and grin at us in the most friendly fashion.

We must remember that this chances to be the very best moment of the whole year in which to see the Cape and the dwellers thereat. The cold weather has left its bright roses on the children's cheeks, and the winter rains exceptionally heavy this year made every blade of grass and leaf of tree to laugh and sing in freshest green. After the dry, windy summer I am assured there is hardly a leaf and never a blade of grass to be seen in Cape Town, and only a little straggling verdure under the shelter of the mountain. The great want of this place is water. No river, scarcely a brook, refreshes one's eye for many and many a league inward. The necessary water for the use

CAPE TOWN, SOUTH AFRICA

of the town is brought down by pipes from the numerous springs which trickle out of the granite cliffs of Table Mountain, but there is never a sufficiency to spare for watering roads or grass-plots. This scarcity is a double loss to residents and visitors, for one misses it both for use and beauty.

[From Cape Colony our travellers proceeded to Natal, where they made their home in the town of Maritzburg. Lady Barker tells an interesting story of the events of her life there, of which, however, we have space but for one or two incidents. The first is an account of Zulu marriage customs. After describing a Zulu wedding conducted in civilized fashion, she tells us how the uncivilized natives conduct this ceremony.]

In spite of the imposing appearance of bride and bridegroom, in spite of the good sign all this aping of our ways really is, in spite of a hundred considerations of that nature which ought to have weighed with me, but did not, I fear, I took far more interest in a real Kafir marriage, a portion of whose preliminary proceedings I saw two days after this gala procession in white muslin and gray tweed.

I was working in the veranda after breakfast,—for you must know that it is so cold in-doors that we all spend the middle part of the day basking like lizards in the delicious warmth of sunny air outside,—when I heard a distant but loud noise beyond the sod fence between us and a track leading over the hills, in whose hollows many a Kafir kraal nestles snugly. I knew it must be something unusual, for I saw all our Kafirs come running out in a state of great excitement, calling to each other to make haste. G—— too left the funeral obsequies of a cat-murdered pigeon in which he was busily employed, and scampered off to the gate, shouting to me to come and see. So I, who am the idlest mortal in the world, and dearly love an excuse for leaving whatever rational employment I am engaged upon,

snatched up the baby, who was supremely happy digging in the dust in the sunshine, called Maria in case there might be anything to explain, and ran off to the gate also.

But there was nothing to be seen, not even dust: we only heard a sound of monotonous singing and loud grunting coming nearer and nearer, and by and by a muffled tread of bare hurrying feet shuffling through the powdered earth of the track. My own people had clambered up on the fence, and were gesticulating wildly and laughing and shouting, Tom waving the great wooden spoon with which he stirs his everlasting "scoff." "What is it, Maria?" I asked. Maria shook her head and looked very solemn, saying, "I doan know," but even while she spoke a broad grin broke all over her face, and she showed her exquisite teeth from ear to ear as she said, half contemptuously, "It's only a wild Kafir wedding, lady. There are the warriors: that's what they do when they don't know any better." Evidently, Maria inclined to the long white muslin gown of the civilized bride which I had so minutely described to her, and she turned away in disdain.

Yes, here they come,—first, a body of stalwart warriors dressed in skins, with immense plumes of feathers on their heads, their lithe, muscular bodies shining like ebony as they flash past me,—not so quickly, however, but that they have time for the *politesse* of tossing up shields and spears with a loud shout of "Inkosi!" which salutation the baby, who takes it entirely to himself, returns with great gravity and unction. These are the vanguard, the flower of Kafir chivalry, who are escorting the daughter of a chieftain to her new home in a kraal on the opposite range of hills. They make it a point of honor to go as quickly as possible, for they are like the stroke oar and give the time to the others.

After them come the male relatives of the bride, a

motley crew, numerous, but altogether wanting in the style and bearing of the warriors. Their garb, too, is a wretched mixture, and a compromise between clothes and no clothes, and they shuffle breathlessly along, some with sacks over their shoulders, some with old tunics of red or blue and nothing else, and some only with two flaps or aprons. But all wear snuff boxes in their ears,—snuff boxes made of every conceivable material,—hollow reeds, cowries, tiger-cats' teeth, old cartridge-cases, acorn-shells, empty chrysalises of some large moth,—all sorts of miscellaneous rubbish which could by any means be turned to this use. Then comes a more compact and respectable-looking body of men, all with rings on their heads, the Kafir sign and token of well-to-do-ness, with bare legs, but draped in bright-colored rugs or blankets. They too fling up their right arm and cry "Inkosi!" as they race along, but are more intent on urging on their charge, the bride, who is in their midst. Poor girl! she has some five or six miles yet to go, and she looks ready to drop now; but there seems to be no consideration for her fatigue, and I observe that she evidently shrinks from the sticks which her escort flourish about.

She is a good-looking, tall girl, with a nice expression in spite of her jaded and hurried air. She wears only a large sheet of coarse brownish cloth draped gracefully and decently around her, leaving, however, her straight, shapely legs bare to run. On her right arm she too bears a pretty little shield made of dun and white ox-hide, and her face is smeared over brow and cheeks with red clay, her hair also being tinged with it. She glances wistfully, I fancy, at Maria standing near me in her good clothes and with her fat, comfortable look.

Kafir girls dread being married, for it is simply taking a hard place without wages. Love has very rarely anything

to do with the union, and yet the only cases of murder of which I have heard have been committed under the influence of either love or jealousy. This has always seemed odd to me, as a Kafir girl does not appear at all prone to one or the other. When I say to Maria, "Perhaps you will want to marry some day, Maria, and leave me?" she shakes her head vehemently, and says, "No, no, I should not like to do that: I should have to work much harder, and no one would be kind to me." Maria too looks compassionately at her savage sister racing along, and murmurs, "Maria would not like to have to run so fast as that." Certainly, she is not in good condition for a hand gallop across these hills, for she is bursting out of all her gowns, although she is growing very tall as well.

There is no other woman in the bridal cavalcade, which is a numerous one, and closes with a perfect mob of youths and boys grunting and shuffling along. Maria says, doubtfully, "I think they are only taking that girl to look at her kraal. She won't be married just yet, for they say the heer is not ready so soon." This information is shouted out as some of the party rush past us, but I cannot catch the exact words amid the loud monotonous song with a sort of chorus or accompaniment of grunts.

[Natal has its literary aspirations, and a bazaar was held by the Natal Literary Society for the purpose of raising funds for the establishment of a library and reading-room. It was very successful, too, people contributing and buying liberally. But we are not going all the way to South Africa to describe a bazaar, and introduce it only as the frame for an amusing story which Lady Barker has to tell.]

Some of our best customers were funny old Dutchmen from far up country, who had come down to the races and the agricultural show, which were all going on at the same time. They bought recklessly the most astounding things,

but wisely made it a condition of purchase that they should not be required to take away the goods. In fact, they hit upon the expedient of presenting to one stall what they bought at another; and one worthy, who looked for all the world as if he had sat for his portrait in dear old Geoffrey Crayon's "Sketch-Book," brought us at our stall a large wax doll dressed as a bride, and implored us to accept it, and so rid him of its companionship. An immense glass vase was bestowed on us in a similar fashion later on in the evening, and at last we quite came to hail the sight of those huge beaver hats, with their broad brims and peaked crowns, as an omen of good fortune. But what I most wanted to see all the time were the heroes of the rocket practice. You do not know, perhaps, that delicious and veritable South African story; so I must tell it to you, only you ought to see my dear Boers, or emigrant farmers, to appreciate it thoroughly.

A little time ago the dwellers in a certain small settlement far away on the frontier took alarm at the threatening attitude of their black neighbors. I need not go into the rights—or rather the wrongs—of the story here, but skip all preliminary details and start fair one fine morning when a *commando* was about to march. Now, a commando means a small expedition armed to the teeth, which sets forth to do as much retaliatory mischief as it can. It had occurred to the chiefs of this warlike force that a rocket apparatus would be a very fine thing, and likely to strike awe into savage tribes, and so would a small, light cannon. The necessary funds were forthcoming, and some kind friend in England sent them out a beautiful little rocket-tube, all complete, and the most knowing and destructive of light field-pieces.

They reached their destination in the very nick of time, —the eve, in fact, of the departure of this valiant com-

mando. It was deemed advisable to make trial of these new weapons before starting, and an order was issued for the commando to assemble a little earlier in the market-square, and learn to handle their artillery pieces before marching. Not only did the militia assemble, but all the townsfolk, men, women, and children, and clustered like bees round the rocket-tube, which had been placed near the powder-magazine, so as to be handy to the ammunition. The first difficulty consisted in finding anybody who had ever seen a cannon before: as for a rocket-tube, that was indeed a new invention. The most careful search only succeeded in producing a Boer who had many, many years ago made a voyage in an old tea-ship which carried a couple of small guns for firing signals, etc. This valiant artillery-man was at once elected commander-in-chief of the rocket-tube and the little cannon, while everybody stood by to see some smart practice.

The tube was duly hung on its tripod, and the reluctant fellow-passenger of the two old cannon proceeded to load, and attempted to fire it. The loading was comparatively easy, but the firing! I only wish I understood the technical terms of rocket-firing, but, although they have been minutely explained to me half a dozen times, I don't feel strong enough on the subject to venture to use them. The results were, that some connecting cord or other having been severed contrary to the method generally pursued by experts in letting off a rocket, *half* of the projectile took fire, could not escape from the tube on account of the other half blocking up the passage, and there was an awful internal commotion instead of an explosion. The tripod gyrated rapidly, the whizzing and fizzing became more pronounced every moment, and at last, with a whish and a bang, out rushed the ill-treated and imprisoned rocket. But there was no clear space for it. It ricochetted among

the trees, zigzagging here and there, opening out a line for itself with lightning speed among the terrified and flustered crowd. There seemed no end to the progress of that blazing stick. A wild cry arose, "The powder magazine!" but before the stick could reach so far, it brought up all standing in a wagon, and made one final leap among the oxen, killing two of them and breaking the leg of a third.

This was an unfortunate beginning for the new captain, but he excused himself on the ground that, after all, rockets were not guns: with those he was perfectly familiar, having smoked his pipe often and often on board the tea-ship long ago, with those two cannon full in view. Yet the peaceablest cannons have a nasty trick of running back and treading on the toes of the by-standers; and to guard against such well-known habits it seemed advisable to plant the *trail* of this little fellow securely in the ground, so that he must perforce keep steady. "Volunteers to the front with spades!" was the cry, and a good-sized grave was made for the trail of the gun, which was then lightly covered up with earth. There was now no fear in loading him, and, instead of one, two charges of powder were carefully rammed home, and two shells put in.

There was some hitch, also, about applying the fuse to this weapon, fuses not having been known on board the tea-ship; but at last something was ignited, and out jumped *one* shell right into the middle of the market-square, and buried itself in the ground. But, alas and alas! the cannon now behaved in a wholly unexpected manner. It turned itself deliberately over on its back, with its muzzle pointing full among the groups of gaping Dutchmen in its rear, its wheels spun round at the rate of a thousand miles an hour, and a fearful growling and sputtering could be heard inside it. The recollection of the second shell now obtruded itself

vividly on all minds, and caused a furious stampede among the spectators. The fat Dutchmen looked as if they were playing some child's game. One ran behind another, putting his hands on his shoulders, but no sooner did any person find himself the first of a file than he shook off the detaining hands of the man behind him and fled to the rear to hold on to his neighbor. However ludicrous this may have looked, it was still very natural with the muzzle of a half-loaded cannon pointing full towards you, and one is thankful to know that with such dangerous weapons around no serious harm was done.

If you could only see the fellow-countrymen of these heroes, you would appreciate the story better,—their wonderful diversity of height, their equally marvellous diversity of breadth, of garb and equipment. One man will be over six feet high, a giant in form and build, mounted on a splendid saddle fresh from the store, spick and span in all details. His neighbor in the ranks will be five feet nothing, and an absolute circle as to shape; he will have rolled with difficulty on to the back of a gaunt steed, and his horse-furniture will consist of two old saddle-flaps sewn together with a strip of bullock-hide, and with a sheepskin thrown over all. You may imagine that a regiment thus turned out would look somewhat droll to the eyes of a martinet in such matters, even without the addition of a cannon lying on its back kicking, or a twirling rocket-tube sputtering and fizzing.

QUEEN RANAVALONA OF MADAGASCAR.

IDA PFEIFFER.

[The veteran lady traveller from whose "Last Travels" our present selection is taken spent a period in Madagascar, of the manners and customs of whose people she gives a very interesting account. The selection here given relates principally to Queen Ranavalona I. (Ranavola, as spelled by our author), a woman whose deeds of cruelty would have justified at that time the seizure of her kingdom by the French, as has just been done in the reign of her descendant, Ranavalona III. Mrs. Pfeiffer first describes the ceremonies of a court introduction.]

OUR introduction at court took place on the 2d of June. Towards four o'clock in the afternoon our bearers carried us to the palace. Over the door is fixed a great gilt eagle with extended wings. According to the rule laid down here by etiquette, we stepped over the threshold first with the right foot, and observed the same ceremony on coming to a second gate leading to a great court-yard in front of the palace. Here we saw the queen sitting on a balcony on the first story, and were directed to stand in a row in the court-yard opposite to her. Under the balcony stood some soldiers, who went through sundry evolutions, concluding with a very comic point of drill, which consisted in suddenly poking up the right foot as if it had been stung by a tarantula.

The queen was wrapped, according to the custom of the country, in a wide silk simbu, and wore on her head a big golden crown. Though she sat in the shade, a very large umbrella of crimson silk was held up over her head, this being, it appears, a point of regal state.

The queen is of rather dark complexion, strong and sturdily built, and, though already seventy-five years of

age, she is, to the misfortune of her poor country, still hale and of active mind. At one time she is said to have been a great drunkard, but she has given up that fatal propensity some years ago.

To the right of the queen stood her son, Prince Rakoto, and on the left her adopted son, Prince Ramboasalama; behind her sat and stood sundry nephews and nieces, and other relatives, male and female, and several grandees of the empire.

The minister who had conducted us to the palace made a short speech to the queen, after which we had to bow three times, and to repeat the words "*Esaratsara tombokse*," equivalent to "We salute you cordially," to which she replied, "*Esaratsara*," which means "Well—good!" Then we turned to the left to salute the tomb of King Radama lying a few paces on one side, with three similar bows, whereupon we returned to our former place in front of the balcony and made three more. Mr. Lambert, on this occasion, held up a gold-piece of fifty francs' value, and put it in the hands of the minister who accompanied us. This gift, which every stranger has to offer when he is presented for the first time at court, is called "Monosina." It is not necessary that it should consist of a fifty-franc piece; the queen contents herself with a Spanish dollar or a five-franc piece. Mr. Lambert had, however, already given fifty francs on the occasion of the *sambas-sambas*.

After the delivery of the gold-piece, the queen asked Mr. Lambert if he wished to put any question to her, or if he stood in need of anything, to which he answered "No." She was also condescending enough to turn to me and ask if I was well, and if I had escaped the fever. After I had answered this question, we stayed a few minutes longer, looking at each other, when the bowings and greetings began anew. We had to take leave of Radama's monu-

ment, and on retiring were again reminded not on any account to put the left foot first over the threshold.

Such is the way in which the proud Queen of Madagascar grants audience to strangers. She considers herself far too high and exalted to let them come near her at the first interview. Those who have the great good fortune to win her especial favor may afterwards be introduced into the palace itself, but this is never achieved at a first audience.

The royal palace is a very large wooden building, consisting of a ground-floor and two stories, surmounted by a peculiarly high roof. The stories are surrounded by broad galleries. Around the building are pillars, also of wood, eighty feet high, supporting the roof, which rises to a height of forty feet above them, resting in the centre on a pillar no less than a hundred and twenty feet high. All these columns, the one in the centre not excepted, consist of a single trunk; and when it is considered that the woods which contain trees of sufficient size to furnish these columns are fifty or sixty English miles from the capital, that the roads are nowhere paved, and in some cases quite impassable, and that all the pillars are dragged hither without the help of a single beast of burden, or any kind of machine, and are afterwards prepared and set up by means of the simplest tools, the building of this palace may with truth be called a gigantic undertaking, and the place itself be ranked among the wonders of the world. In bringing home the chief pillar alone five thousand persons were employed, and twelve days were occupied in its erection.

All these labors were performed by people as compulsory service, for which they received neither wages nor food. I was told that during the progress of the work fifteen thousand people fell victims to the hard toil and the want of proper nourishment. But the queen is very little

disturbed by such a circumstance; half the population might perish, if only her high behests are fulfilled.

In front of the principal building a handsome spacious court-yard has been left; around this space stand several pretty houses, all of wood. The chief building is, in fact, uninhabited, and contains only great halls of state and banqueting-rooms; the dwelling-rooms and sleeping-rooms of the queen are in one of the side buildings, communicating by a gallery with the palace.

On the left, the "silver palace" adjoins the larger one. It takes its name from the fact that all the Vandyked ends with which the roof is decorated, and the window and door frames, are hung with innumerable little silver bells. This palace is the residence of Prince Rakoto, who, however, makes very little use of it, generally living at his house in the city.

Beside the silver palace stands the monument of King Radama, a tiny wooden house without windows; to this fact, however, and to the further circumstance of its being built upon a pedestal, it owes its sole resemblance to a monument.

The singular custom prevails in Madagascar, that when a king dies, all his treasures in gold- and silver-ware and other valuables are laid with him in the grave. In case of need, the heir can dig up the treasure, and, so far as I could ascertain, this had been done in every instance. . . .

I do not grudge the queen the treasure she has accumulated; but it would be a fortunate thing for the population of the island if it were to be buried very soon, in company —of course—with its gracious possessor. She is certainly one of the proudest and most cruel women on the face of the earth, and her whole history is a record of bloodshed and deeds of horror. At a moderate computation it is reckoned that from twenty to thirty thousand people perish

annually in Madagascar, some through the continual executions and poisonings, others through grievous labor purposely inflicted, and from warfare. If this woman's rule lasts much longer, the beautiful island will be quite depopulated; the population is said to have already shrunk to half the number that it comprised in King Radama's time, and a vast number of villages have disappeared from the face of the land.

Executions and massacres are often conducted in wholesale fashion, and fall chiefly upon the Seklaves, whom the queen seems to look upon with peculiar hatred; but the Malagaseys and the other nations are not much less distasteful to her; and the only tribe that finds any favor at all in her eyes is, as I have already said, the Hovas, from whom she is herself descended.

These Hovas were once the most scorned and hated of all the races in Madagascar; they were regarded as the Pariahs are regarded in India. Under King Radama, however, and especially under the present queen, this race has distinguished itself, and attained the first place by dint of intelligence, bravery, and ambition. But, unhappily, the race has not been improved by prosperity, and the good qualities of the Hovas are more than overbalanced by their evil propensities. Mr. Laborde even declares that the Hova embodies in himself the vices of all the tribes in the island. Mendacity, cunning, and hypocrisy are not only habitual, but cherished vices with him, and he tries to initiate his offspring therein at the earliest possible age. The Hovas dwell among themselves in a continual state of suspicion, and friendship is with them an impossibility. Their cunning and slyness are said to be incredible; the most practised diplomatists of Europe would be no match for them in these qualities.

Of Malay origin, the Hovas are undoubtedly less ugly

than the other races in Madagascar. Their features have less of the negro type, and are even better shaped than those of the Malays in Java and the Indian Archipelago, whose superiors they are also in stature and bodily strength. Their complexion varies through every shade from olive-yellow to dark reddish-brown. Some are very light; but, on the other hand, I noticed many, especially among the soldiers, whose color approximated so much to the red tint that I should have taken them more for genuine "redskins" than even the North American Indians, to whom that name is applied from the ruddy tinge in their skin. Their eyes and hair are black; they wear the hair long, and this is of a frizzly woolly texture.

Even the Hovas, the favorites of the queen, are ruled with a ruthless iron hand; and though they may not be put to death by hundreds and thousands like other nations, they are still punished with death for very trifling offences.

[The author proceeds to cite a number of massacres and instances of ruthless cruelty committed by order of the queen, which may profitably be omitted, and less severe instances cited.]

In the year 1855 certain people in the province of Vonizonga unfortunately took it into their heads to assert that they had discovered a means of catching a thief by invisible agency; that when he stretched out his hand with felonious intent, they could charm his arm so as to prevent him from drawing it back or moving from the spot. When the queen heard of this, she commanded that the people in question should be severely punished, for she fancied she herself might one day come into that district, and be killed by similar witchcraft. Two hundred persons were taken prisoners, and condemned to the *tanguin*, of whom a hundred and eighty perished.

The tanguin, or poison test, is often applied to persons

of all grades,—to the high nobles as well as the slaves; for the mere accusation of any crime is sufficient to bring it upon the victim. Any man may start up as accuser. He need not bring forward any proofs, for the only condition he has to fulfil is to deposit a sum of twenty-eight and a half dollars. The accused persons are not allowed to make any defence, for they must submit to the poisoning ordeal under all circumstances. When any one gets through without perishing, a third part of the deposited money is given to him, a second third belongs to the queen, and the remainder is given back to the accuser. If the accused dies, the accuser receives all his money back, for then the accusation is looked upon as well founded.

The poisoning process is managed in the following manner. The poison employed is taken from the kernel of a fruit as large as a peach, growing upon trees called *Tanguinea veneneflua*. The lampi-tanguini, or person who administers the poison, announces to the accused the day on which he is to take it. For forty-eight hours before the appointed time he is allowed to eat very little, and for the last twenty-four hours before the trial nothing at all.

His friends accompany him to the poisoner's house; here he has to undress himself, and make oath that he has not had resource to any kind of magic. The lampi-tanguini then scrapes away as much powder from the kernel with a knife as he judges necessary for the trial. Before administering the dose to the accused he asks him if he confesses his crime; but the culprit never does this, as he would have to take the poison notwithstanding. The lampi-tanguini spreads the poison on three little pieces of skin, about an inch in size, cut from the back of a fat fowl; these he rolls together and bids the accused swallow them.

In former days almost every one who was subjected to this ordeal died in great agony; but for the last ten years

every one who has not been condemned by the queen herself to the tanguin is permitted to make use of the following antidote. As soon as he has taken the poison his friends make him drink rice-water in such quantities that his whole body sometimes swells visibly, and quick and violent vomiting is generally brought on. If the poisoned man is fortunate enough to get rid not only of the poison, but of the three little skins (which latter must be returned uninjured), he is declared innocent, and his relations carry him home in triumph with songs and rejoicings. But if one of the pieces of skin should fail to reappear, or if it be at all injured, his life is forfeited, and he is executed with the spear or by some other means.

One of the nobles who frequently visited our house had been condemned several years ago to take the tanguin. Happily for him, he threw up the poison and the three pieces of skin in perfect condition. His brother ran in great haste to the wife of the accused to announce this joyful event to her, and the poor woman was so moved by it that she sank fainting to the ground. I was astonished at hearing of such a display of feeling from one of the women of Madagascar, and could not at first believe the account true. I heard, however, that if the husband had died, she would have been called a witch, and probably condemned to the tanguin likewise, so that the violent emotion was probably caused more by joy at her own deliverance than by the good fortune of her husband.

During my stay in Tananarivo a woman suddenly lost several of her children by death. The mother was accused of causing the fate of the poor little ones by magic arts, and was condemned to the tanguin. The poor creature threw up the poison and two of the skins, but as the third did not make its appearance, she was killed without mercy.

[Other instances of cruelty are cited, and the author continues:]

But executions, poisonings, slavery, plunderings, and other punishments do not exhaust the people's catalogue of woes. In devising plans of malignity and cruelty Queen Ranavola's penetration is wonderful, and she has invented further means of ruining the unhappy population and plunging it still deeper into misery. One device for carrying out this end, often adopted by the queen, is a royal journey. Thus, in the year 1845, Queen Ranavola made a progress to the province of Mancrinerina, ostensibly to enjoy the sport of buffalo-hunting. On this journey she was accompanied by more than fifty thousand persons. She had invited all the officers, all the nobles, far and near, around Tananarivo, and, that the procession should appear as splendid as possible, every one had to bring with him all his servants and slaves. Of soldiers alone ten thousand marched with them, and almost as many bearers, and twelve thousand men always kept a day's journey in advance, to make the roads broader and repair them. Nor were the inhabitants of the villages spared through which the queen passed. A certain number, at least, had to follow the train, with their wives and children. Many of the people were sent forward, like the road-menders, to prepare the night's lodging for the queen,—no trifling task, as the houses or tents prepared for the royal family had to be surrounded by a high rampart of earth, lest her gracious majesty should be attacked by enemies during the night, and torn forcibly away from her beloved people.

Inasmuch as this philanthropic potentate is accustomed, on a journey of this kind, only to make provision for her own support, and gives her companions nothing but the permission to live on the stores they have brought for themselves (provided, of course, they have been able to procure any), famine very soon makes its appearance

among the mass of soldiers, people, and slaves. This was the case in the journey of which I speak; and in the four months of its duration nearly ten thousand people, and among them a great proportion of women and children, are said to have perished. Even the majority of the nobles had to suffer the greatest privations; for, wherever a little rice was left, it was sold at such a high price that only the richest and noblest were able to purchase it.

In the first years of Queen Ranavola's rule, before she found herself seated securely enough on the throne to gratify her blood-thirsty propensities on her own subjects, her hatred was chiefly directed towards the descendants of King Radama and towards the Europeans. Regarding the latter, she frequently held councils with her ministers and other grandees concerning the measures to be taken to keep the detested race away from her territories. Mr. Laborde informed me that on these occasions the most absurd and extravagant propositions were brought forward. Thus, for instance, one of the wise councillors urged the expediency of building a very high, strong wall in the sea round about Madagascar, so that no ship should be able to approach any of the harbors. A second wise-acre proposed to the queen to have four gigantic pairs of shears manufactured and fixed on the roads leading from the various harbors to the capital. Whenever a European came along the shears were to be clapped to the moment he stepped between them, and thus the daring intruder would be cut in two. A third councillor, as wise as his companions, advised the queen to have a machine prepared with a great iron plate, against which the cannon-balls fired from hostile ships would rebound and sink the aggressive vessels by being hurled back upon them.

All these suggestions were received by her majesty with much approbation, and formed matter for deliberation in

the exalted council for days and weeks; but, unfortunately, none of them were found practicable.

The queen is particularly fond of witnessing fights between bulls, and this noble sport is frequently carried on in the fine large court-yard in front of the palace. Among the honored combatants some are her favorites: she asks after their health every day, and is as anxious about them as a European lady might be about her lapdogs; and, to carry out the simile, she often takes more interest in their well-being than in the comfort of her servants and friends.

In one of these contests, one of her favorite bulls—in fact, the chief of them—was slain: the poor queen was inconsolable at her loss. Until now no one had ever seen her weep. But then she had never met with so heavy a misfortune. She had certainly lost her parents, her husband, a few children, and some brothers and sisters; but what were all these in comparison to the favorite bull? She wept much and bitterly, and it was long before she would take comfort. The animal was buried with all the honors accorded to a grandee of the state. It was wrapped in a number of simbus, and covered with a great white cloth, and the marshals had to lay it in the grave. The marshals showed on this occasion that the race of courtiers flourishes in Madagascar; they were so proud of the distinction that they boast of it to the present day. Two great stones are placed on the grave, in memory of the dear departed, and the queen is said to think of him still with gentle sorrow.

The bull's monument is in the inner town. I saw it myself, and thought, also with sorrow, not of the bull, but of the unhappy people languishing under the cruel oppression of this barbarous queen.

DESERT TRAVELLING IN AUSTRALIA.

PETER EGERTON WARBURTON.

[The exploration of Australia was a task needing no little endurance in its performers, and testing their powers to the uttermost. Within the bordering region of the coast the vast interior of the island is largely rainless, and desert conditions widely prevail in regions where sufficient rain would make a country of the highest fertility. Several daring explorers traversed the interior in the early period of settlement, including Eyre, Sturt, Kennedy, Leichhardt, Stuart, Warburton, etc. Of the narratives of these explorers we have chosen Colonel Warburton's "Journey across the Western Interior of Australia" (1872–73) to select from, giving, as it does, a vivid description of the sufferings of the explorers. He had gone, with camels for beasts of burden, through vast reaches of forbidding country, and was now approaching running water and the coast.]

We are to commence our flight to the Oakover at sunset. God grant us strength to get through! Richard is very weak and so am I. To get rid of a small box, we selected a few bottles of homœopathic medicines for use and ate up all the rest. How much of our property we had thrown away before we resorted to this expedient of lightening the loads may be guessed. I started later than we intended, our course about west by south. The sand-hills are more troublesome than we have had them for some time. When we wanted to look north and south for water, the sand-hills generally ran east and west; now, when we particularly wish to avoid crossing them, we are compelled to do so from their running northwest by west. The eclipse of the moon darkened our journey for several hours, but we made a favorable stretch westward for the last few miles of our night's journey. I could not go so

far as I had hoped, from the fatiguing character of the country. Camped at 3.15 A.M.

5*th* [November, 1873].—A strong east wind is blowing. We are compelled to give up smoking while on a short allowance of water. It is a deprivation, for smoke and water stand in the place of food. We started west-south-west at 6.30 P.M., and made twenty-five miles, though we had most trying sand-hills to cross. I became quite unable to continue the journey, being reduced to a skeleton by thirst, famine, and fatigue. I was so emaciated and weak I could scarcely rise from the ground, or stagger half a dozen steps when up. Charley [a native member of the party] had been absent all day, and we were alarmed about him when he did not return at sunset. I knew not what to do. Delay was death to us all, as we had not water enough to carry us through; on the other hand, to leave the camp without the lad seemed an inhuman act, as he must then perish. It was six against one, so I waited till the moon was well up, and started at nine P.M.

We made about eight miles, and while crossing a flat heard, to our intense delight, a "cooee," and Charley joined us. Poor lad, how rejoiced we were to see him again so unexpectedly! The lad had actually walked about twenty miles after all the fatigue of the previous night's travelling; he had run up a large party of natives, and gone to their water. This news of more water permitted us to use at once what we had with us, and the recovery of Charley put us in good spirits. It may, I think, be admitted that the hand of Providence was distinctly visible in this instance.

I had deferred starting until nine P.M., to give the absent boy a chance of regaining the camp. It turned out afterwards that had we expedited our departure by ten minutes, or postponed it for the same length of time, Charley would have missed us; and had this happened, there is little doubt

that not only myself, but probably other members of the expedition, would have perished from thirst. The route pursued by us was at right angles with the course taken by the boy, and the chances of our stumbling up against each other in the dark were infinitesimally small. Providence mercifully directed it otherwise, and our departure was so timed that, after travelling from two to two hours and a half, when all hope of the recovery of the wanderer was almost abandoned, I was gladdened by the "cooee" of the brave lad, whose keen ears had caught the sound of the bells attached to the camels' necks.

To the energy and courage of this untutored native may, under the guidance of the Almighty, be attributed the salvation of the party. It was by no accident that he encountered the friendly well. For fourteen miles he followed up the tracks of some blacks, though fatigued by a day of severe work, and, receiving a kindly welcome from the natives, he had hurried back, unmindful of his own exhausted condition, to apprise his companions of the important discovery he had made. We turned towards the native camp, and halted a short distance from it, that we might not frighten them away. I was so utterly exhausted when we camped at three A.M., that it was evident I never could have gone on after that night without more food and water. I would therefore thankfully acknowledge the goodness and mercy of God in saving my life by guiding us to a place where we got both.

7th.—Reached the well at six A.M. The natives fled at our approach, but returned after a little time. Wallaby were procured from them by barter. The fresh meat and plenty of water restored me for a time from my forlorn condition. There are so many natives that they drink more of their own water than we can well spare them. We obtained here the rest we all so much needed.

8th.—The natives all disappeared at daylight, and our hope of more food goes with them. I have invariably throughout the journey carried my pistol in my belt, but for the last few days its weight was too much for me, and I had put it in my bag. While lying under the shade of a blanket, with my head on the bag, one barrel unaccountably went off, and, had not the muzzle been turned from me, I should have had the ball through my head. My life has again been given to me. Our position now is lat. 20° 41′, long. (by account) 122° 30′; so I hope we are not more than three days' journey from the Oakover, and we expect to find some tributary before reaching the river itself. We trust a better country may supply us with some means of getting food. The natives at this camp have a large sea-shell for a drinking-cup; they have also an old butcher's knife, and seem to be acquainted with cattle. I think they have seen white men before. That they possessed a knowledge of cattle was inferred from the signs they made, and from a tolerably good imitation of lowing when they saw the camels. All these things cheer us with the hope of our reaching a country in which we may find something to eat.

The terrible sand-hills we have crossed have impeded our progress, and the country yields us nothing whatever; I cannot get even a crow or a snake. The sun-dried camel meat affords us only a nominal subsistence; there is not a particle of nourishment in it. We are not particular, and whatever we could get we should eat. One of the camels is reported to be ailing. These animals, though most enduring when well, appear liable to many sudden and unaccountable maladies. We started towards the west at seven P.M. Crossed some sand ridges; but the flats, though more extensive, are very bad for travelling over, being thickly covered with immense tussocks of spinifex. This and the ailing camel lessened our progress. Passed one small dry

clay-pan and several ant-hills, which looks as if we were gradually clearing those frightful sand-hills that have worn us out and cost us so many camels. Camped at 3.30 A.M. . . .

We killed our last meat on the 20th of October; a large bull camel has therefore fed us for three weeks. It must be remembered that we have no flour, tea, nor sugar; neither have we an atom of salt, so we cannot salt our meat. We are seven in all, and are living entirely upon sun-dried slips of meat, which are as tasteless and innutritious as a piece of dead bark. Unless the game drops into our hands in great abundance, we must kill another camel directly we get to water. Most of us are nearly exhausted from starvation, and our only resource is a camel, which would disappear from before us in a twinkling.

Started at 6.15 P.M. Travelled five hours; then took a latitude, which put us in 21° 2′; so we turned west for three hours more, completing twenty miles over very hard country and heavy sand-hills.

12*th*.—We find no appearance of change in the country, and suppose that we are more to the eastward than we supposed, or else the head of the Oakover is laid down more to the eastward than it is. The error is most probably mine, as it is difficult to keep the longitude quite correct after travelling so many months on a general westerly course. Our position is most critical, in consequence of the weakness of the camels. They cannot get over this terrible country and stand the fierce heat without frequent watering and rest. Without water we are helpless.

Three P.M. I have decided to send Lewis, the two camel men, and the black boy on ahead with the best and strongest camels, to try and reach the river, returning to us with water if successful. My son and Dennis White and myself remain behind, but following the first party as fast as our jaded camels can take us. We have abandoned

everything but our small supply of water and meat, and each party has a gun.

Lewis and his party started at 6 P.M. We left ourselves at 6.30. We could only make about four miles, when we lay down till 2 A.M. Starting again, we had made about eight miles when we were surprised by a voice, and found we had overtaken the advance party, one of whose camels had knocked up on the previous night. This was a death-blow to our hopes of getting relief by sending them on first. We are hemmed in on every side; every trial we make fails, and I can now only hope that some one or more of the party may reach water sooner or later. As for myself, I can see no hope of life, for I cannot hold up without food and water. I have given Lewis written instructions to justify his leaving me should I die, and have made such arrangement as I can for the preservation of my journals and maps. The advance party has started again, and we followed till a little after sunrise, when our camels showed signs of distress, and we camped. Should the advance party see likely smokes, they are to turn to them.

My party at least are now in that state that, unless it please God to save us, we cannot live more than twenty-four hours. We are at our last drop of water, and the smallest bit of dried meat chokes me. I fear my son must share my fate, as he will not leave me. God have mercy upon us, for we are brought very low, and by the time death reaches us we shall not regret exchanging our present misery for that state in which the weary are at rest.

We have tried to do our duty, and have been disappointed in all our expectations. I have been in excellent health during the whole journey, and am so still, being merely worn out from want of food and water. Let no self-reproaches afflict any one respecting me. I undertook

the journey for the benefit of my family, and I was quite equal to it under all the circumstances that could be reasonably anticipated; but difficulties and losses have come upon us so thickly for the last few months that we have not been able to move. Thus, our provisions are gone, but this would not have stopped us could we have found water without such laborious search. The country is terrible. I do not believe men ever traversed so vast an extent of continuous desert.

We follow this afternoon on the advance tracks as far as our camels can take us. Richard shot me a little bird. It was only about the size of a sparrow, but it did me good. If the country would only give any single thing we could eat I should do very well, but we cannot find a snake, kite, or crow. There are a few wallabies in the spinifex, but we cannot get them. Our miseries are not a little increased by the ants. We cannot get a moment's rest, night or day, for them.

13*th.*—My rear party could only advance eight miles, when the camels gave in. Our food is scanty enough, but our great want is water. We have a little, but dare not take more than a spoonful at a time, while the heat is so great that the slightest exposure and exertion bring on a parching thirst. We are as low and weak as living men well can be, and our only hope of prolonging our lives is in the advance party finding some native camp; we have seen smokes, but are in too crippled a state to go to them.

14*th.*—Early this morning my son took our man White, and started in the direction of the smoke we had last seen. At mid-day, while I was sipping in solitude a drop of water out of a spoon, Lewis came up with a bag of water. Never shall I forget the draught of water I then got, but I was so weak that I almost fainted shortly after drinking it. The advance party had run up a smoke and found a well

about twelve miles off. Our lives were saved, but poor Charley was nearly killed. He had gone forward alone (at his own request, and as he had done before) to the native camp, the remainder of the party with the camels keeping out of sight. The blacks treated Charley kindly and gave him water; but when he cooeed for the party to come up, and the camels appeared, then I suppose the men were frightened, and supposed Charley had entrapped them. They instantly speared him in the back and arm, cut his skull with a waddy, and nearly broke his jaw.

I do not think this attack was made with any premeditated malice; but doubtless they would have killed the lad had not the remainder of the party, rushing to his rescue, frightened them away. Unfortunately, the few medicines we had not eaten had by some oversight been left behind at the camp, where we abandoned almost everything but the clothes we happened to stand up in. Lewis returned to the well, and was to come out and meet us next day with more water. We started at sunset, but could not keep on the tracks for more than two miles, when we camped.

15*th.*—We made another effort at daylight to get on, but one of the camels broke down, though it had not carried a saddle. The poor beast had become quite blind, and staggered about in a most alarming way. We could not get her beyond a mile and a half when she knocked up under the shade of a bush, and would go no farther. We therefore also sat down to await the water to be sent out to us. The heat was intense, and my son, having been obliged to walk because the camel could not carry him, suffered very greatly from thirst; and had not water been brought us before mid-day, it would have gone ill with him. Between ten and eleven A.M. Lewis returned with water from the well.

The camel, though we gave it some water, could not move from the shade of the bush. We tried to drive it, and to drag it, but to no purpose, therefore we shot it. My son and White returned to the well for more water, and to bring out camels to carry the meat. Lewis remained with me to cut up the camel and prepare it for carriage. We sent the head and tail, with the liver and half the heart and kidneys, to make soup for Charley, and a little picking for the rest. I hope the fact of the camel's head not having been turned towards Mecca, or its throat cut by a "True Believer," may not prejudice the camel men against the use of what we send.

Cutting up the camel and eating the "titbits" was the work of the day. We have now only five camels, and one of them so weak it cannot carry a saddle. Could we but reach the Oakover, we might manage some way or other; but the camels must take us there, or we shall never see it. I am sanguine now that we shall get there with at least four camels; two days ago I never expected to be able to leave the spot I was lying on.

[This painful progress continued until December 4, when they reached a creek tributary to the Oakover. On the 11th they reached the river. Thenceforth water was not lacking, but food was very scarce, and their privation continued. They camped on the river, and sent two of their party on the only two camels capable of travel towards the coast in search of aid. We take up the narrative again on Christmas-day.]

We cannot but draw a mental picture of our friends in Adelaide sitting down to their Christmas-dinner, while we lie sweltering on the ground starving, and should be thankful to have the pickings out of any pig's trough. This is no exaggeration, but literal truth. We cut out three bee-holes to-day, but found no honey in any of them. No sign of Lewis. If he is not here by the close of Sunday next,

I shall be obliged to suppose he has gone to Roebourne, in which case there can be no hope of his return for the next three weeks, and, except God grant us His help, we cannot live so long on our present supply.

Our lives have been preserved through many and great dangers, so my trust is in God's mercy towards us; it never fails, though it does not take always the course we look for.

We fancied we should find many opossums in the gum-trees, but have not seen one. We have fish close to us, but though we deprive ourselves of the entrails of a bird as bait, they will not take it. We eat everything clean through from head to tail. Prejudiced cooks may not accept my advice, but I am quite satisfied all birds ought to be cooked whole, extracting what you please afterwards. We omitted the latter operation, but this is a matter depending on circumstances.

Our last Christmas at Alice Springs was miserable enough, as we then thought, but the present beats it out and out.

26*th.*—Desperately hot, but still dry. Obtained a shag and two white cockatoos. Richard's leg is improving, yet he is exceedingly weak; not very much better than I am.

27*th.*—Passed in our ordinary heated idleness.

28*th.*—Threatening rain, but none fell. How heavily time hangs on our hands! We drink, smoke, and sleep as much as we can, then talk about what we should like to eat.

29*th.*—Sahleh's finger is very bad indeed from the scorpion sting. The state of our blood allows no wound to heal of itself, and I have no medicine suitable to his case. If it continues to get worse without any prospect of surgical aid, some one (not I) will have to chop his finger off with a tomahawk or he will lose his arm and his life.

Lewis not having returned, I am compelled to think either that there is no station on the De Grey, or that he has missed it and gone on to Roebourne, in which case he cannot be back for a fortnight. Our position stands thus: We have abundance of water, a little tobacco, and a few bits of dried camel. Occasionally an iguana or a cockatoo enlivens our fare, and lastly, I hope the late rain will bring up some thistles or pig-weed that we can eat.

Our difficulties are to make our meat last, though, so far from doing us good, we are all afflicted with scurvy, diarrhœa, and affection of the kidneys from the use of it. We cannot catch the fish, we cannot find opossums or snakes, the birds won't sit down by us, and we can't get up to go to them. We thought we should have no difficulty in feeding ourselves on the river, but it turns out that from one cause or another we can get very little, and we are daily dropping down a peg or two lower.

I am, however, satisfied that sending down to look for the station was our best plan; if it fail, the two who have been sent may save their lives, and we have a chance of saving ours if we can only hold out, whereas had we all remained, we should have eaten the two camels that are gone, and scarcely have progressed twenty miles; after that our case would have been hopeless. I cannot tell how it may turn out, but I do not regret the measure. We must wait patiently. I am sure Lewis will do all that can be done. His endurance, perseverance, and judgment are beyond all praise, and his various services have been most valuable. My great fear is that the summer rains may set in and stop his return, but we must hope for the best.

A few hours after making the above entry in my journal Lewis returned with an ample supply for all our wants and with six horses to carry us down.

I need not say how thankful we were, or how quickly

we set to work at the food. The camels with the heavier supplies are to come up to-morrow. We all feel most grateful to Messrs. Grant, Harper, and Anderson for their promptitude and liberality.

My companions are all eating to the extent of their powers; for myself, I was too weak to stand the sudden change of food, and am ill in consequence.

[On the 26th of January they reached the settlement, having spent much more than a year in their journey.]

I have now only to close my journal. All distances forward and backward included, our land travelling, as nearly as I can estimate it, has amounted to four thousand miles. We have all got through our trials better than could have been expected. I believe my son and myself are the only two European sufferers. I have lost the sight of one eye, and my son is much shaken in health. Sahleh, the Afghan, left his finger in Roebourne. Beyond this I know of no harm that has been done. We started with seventeen camels and ended with two.

IN THE AUSTRALIAN GOLD-FIELDS.

WILLIAM KELLY.

[William Kelly, the author of several works of travel in the United States, gives in his "Life in Victoria" a graphic picture of the conditions of social life in Australia in the early days of the gold-digging excitement. His narrative is full of pictures of the semi-barbarous state of affairs then existing. From these we select a portion of his account of life in the mines in 1853. He had just reached Ballarat, one of the most active of the gold-digging centres.]

OUR sailor acquaintances and my party next morning resolved ourselves into a joint-stock company, and took the road to the gold-field, under the guidance of two return diggers. The road lay through bold ranges, and was exceedingly beautiful in places, but marked most disagreeably at close intervals throughout with dead and dying bullocks, in a pitiful state of emaciation, whose lacerated hides showed that even to the last stage they were mercilessly flayed by the relentless beasts in human form employed to drive them. It is a strange thing, but strictly true, as far as my experience teaches me, that while in almost all other associations betwixt man and the brute creation a degree of sympathy, if not affection, arises from constant companionship, even though it may be alternated with quarrelsome interludes, no symptom of regard ever pulsates, no chord of kindness ever seems to awaken, in the callous heart of the remorseless bullock-driver for his patient team.

The reciprocal attachment between man and the horse or dog is proverbial. The drunken tinker may thrash his donkey unreasonably at times, but there are moments when he will pull his long ears with friendly warmth. The keeper of wild beasts may use his pole or his scourge sternly on occasion, but a juncture of reconciliation soon follows, when he will pat the leopard softly on the head, and thrust him a titbit of atonement through the bars of his cage. But the bullock-puncher is a type of humanity apart from his fellows; he is neither to be propitiated by the willingness of his team, nor appeased by their most prodigious exertions; cuts and curses are their reward, cuts and curses their punishment. After the most toilsome day's journey he will ruthlessly turn them scalding and bleeding from the yoke, without caring to provide them either food or water, next morning goading them as

cruelly as if they came to their task lusty from replenishment; and, finally, when a meekly enduring brute, yielding to exhausted nature, sinks, without a moan, upon the road from pure inanition, the man-devil will drive the spike of the whip-handle into his still living eye, and unyoke the poor dying beast with a horrible malediction. I marked the class in America, in California, in Mexico, in Central America, at the Cape, and in Australia, and they all seem to be of the self-same family,—fiends incarnate,—without a drop of the milk of human kindness in their veins, inaccessible at all times to the promptings of charity or mercy.

About half-way from Bunningyong one of our volunteer guides took us a little aside the track to show us the scene of a clever trick, put in practice by a pair of brothers who commenced their traffic in Ballarat by sly grog-selling on a small scale; but the profits of the trade were so enormous, they gradually extended it until they were enabled to buy a horse-team of their own and take their supplies direct from head-quarters. On their last journey in the district they got safely thus far with a full freight, which, at the current rates, would have completed "their pile;" but they got stuck in a piece of swampy ground in the dusk and were unable to proceed, while in the morning they found their misfortune aggravated by the abduction of their horses; but necessity, that prolific mother, quickly presented them with a bantling, under the instigation of which they set to work sinking a hole, as if they had discovered a fresh lead. They were mysteriously silent as to their reasons for making the experiment, and altogether deported themselves in that studiously cautious manner calculated to excite remarks and suspicion. The result was that the whisper of a new find soon swelled into the trumpet-tongued rumor of a great discovery, which was

followed by a great rush; but long before a single hole was bottomed the brothers sold the last drop of their grog, and departed without their cart before the cheat was discovered or punished, as it surely would have been could the dupes have laid hands on them.

The first glance at the great and glorious field of Ballarat we got was the celebrated Canadian Gully, then radiant with the still fresh fame of the enormous one-hundred-and-thirty-seven-pound nugget. I was first struck, before approaching it closely, with the general aspect of the surrounding district, which, by a retrospective effort, I hastily compared on my mind's tablets with the contour of all the Californian diggings, without being able to discover any analogy in outline, any palpable geological resemblance in general configuration, any special lineament or feature, which could warrant Mr. Hargraves in jumping to the conclusion that gold should necessarily exist in Australia because its geological construction and indications so closely resembled those of California.

I have never been on the Sydney side, and am therefore unable to speak as to the style and configuration of the auriferous country within which the Turon diggings were discovered, but I have been on all the olden fields in Victoria, over their flats, through their gullies, and among their reefs. I have fossicked [pried into; examined minutely] on their surface, examined their shafts, crawled through their drives, and worked in their quartz tunnels, seeing little in common betwixt the countries but the gold, and even that is dissimilar. The gold-fields of California exist in their integrity amidst, or contiguous to, the hips and flanks of the great mountain ranges in distorted regions, peaked, jagged, and irregular from the throes of volcanic convulsion. The gold there, in my time, never selected the smooth level meadows or hanging slopes as resting-places. It was

THE TOWN HALL—SYDNEY, AUSTRALIA

most generally to be found diffused with the soil in the beds or shallow banks of the brawling streamlets, which, leaping from the icy crags of the great Sierra Nevada, hurried, in their almost hidden channels, through deep-seated ravines, whose sides, in their steepness, resembled precipices, the metal, as it became ground finer and finer from attrition and in the various processes of disintegration, finding its way beneath the alluvial deposit of the more open and remote rivers. Diggers there had not to penetrate, as it were, into the bowels of the earth for the precious metal; they found it in the stratum immediately under the earthy deposit, either associated with the hard-packed gravelly subsoil, or in the holes or pockets of the water-worn rocks, and sometimes, like mosaic-work, laminated in the friable sandstone. They rarely worked below the surface, and always close by the margins of brooks or rivers, coming tentwards after the day's toil clean and washed, without stain or soil on their apparel.

But Ballarat affords no indications of violent volcanic parturition. There is nothing in the tournure of its rounded ranges that could not be seen in any ordinary steppe, plain, or prairie. There is no leviathan system of mountain chains at all contiguous. The precious metal there spreads out and subsides on the pipe-clay bottom of flat, wide-spread plains, or settles in great subterranean gutters deep down below the surface, in the entrails of broad elongated slopes, miscalled gullies. It is scarcely ever found in payable quantities in the stratum just beneath the alluvial deposit. On the contrary, the digger is obliged to sink his shaft through stratum after stratum, from fifty to sixty, eighty to ninety, and now to over three hundred feet, before he reaches the embowelled treasure, and he then emerges with the wash-stuff in a coating of yellow muck, as if he were clothed from top to toe in a

complete suit of chamois leather. I am therefore unable, for the life of me, to imagine by what comparative process the analogy is traced, where, according to all ordinary rules, everything appears to be in exact contrast.

Coming in among the diggers, nothing could possibly be more unlike in external appearance than that of the Californian and the Ballaratian. There was an air of comely chivalry about the former, bearded like a pard, with his steeple-crowned sombrero and his wide colored flannel shirt, gathered in above the hips with a red sash, that was stuck round with knifes, daggers, and revolvers; while the latter, in the commonplace garb of an ordinary navvie, without any more attractive-looking weapon than his tobacco-knife, worked like a horse, above and below ground, by night and by day, in a panoply of mud, as if he took minute baths in a thick solution of yellow ochre.

Although I thought I had derived a tolerably accurate notion of digging operations from oral description, I was wholly unprepared for the reality, and as I stood on the platform where the windlass is worked and peered down the clean, straight, dry shafts, rounded and perpendicular as the tunnel of a steamer, or into the wet ones, squared and slabbed with mechanical accuracy, I almost fancied that Victorian digging was a special trade, followed out by strict mathematical rules; and I had very little difficulty in making up my mind, from the specimens then before me, that Ballarat at least was no field for the amateur or 'prentice digger, which also seemed to be an opinion very generally shared in by my now numerous companions.

I could detect a shadow of apprehension overcasting the features of my young Scotch friends and my salt-water comrades as they looked down the holes at the diminuent manikins, working away, up to their very hips in water, by the dim light of a twinkling little candle. I was rather

amused as two of the sailors who had made very free with the brandy bottle were roaring out in chorus, at the end of each verse of our great national and nautical melody, "Britons never shall be slaves," to hear them thus angrily addressed from a yellow digger who just appeared above-ground from a wet deep hole, "Shut up, you pair of bloody fools; only take my place below there for six hours, and see whether Britons ever can be slaves or not." . . .

We first crossed the range to the empty shrine which was erst the repository of the celebrated nugget,—the Mecca of all digging pilgrims. Empty, did I say? We found this natural treasure-chest nearly full of muddy water, situated half-way up on the hip of a quick slope, a proof in itself of the changes which the face of the country must have undergone since the auriferous deposits found a final resting-place, for the simple laws of gravitation would forbid the possibility of a solid chunk of gold, one hundred and thirty-seven pounds weight, remaining on the side of the hill while comparatively unponderous matter settled down at an apparently low level. . . .

This hole, after being first opened for a few feet, was shepherded by three different parties, each going through the form of taking out a few shovelfuls of soil in fulfilment of the digging code, and keeping a watch on the adjoining holes to see if the lead should be struck; but, such not being the case, the last party, after sinking sixty feet, forsook it, and so it remained deserted for some time, until a party of new chums struck into it to make their maiden essay at digging, more for the purpose of taking an initiatory lesson in the art of shaft-sinking than with the expectation of making their fortune. But lo! after clearing off three feet of dirty stuff, one of the lime-juicers struck his pick on a lump of something not hard enough for stone nor soft enough for clay, which yielded a dull muffled

sound to his blow. He struck again with the same result, and again too; then sinking a hole at the edge to prize the obstacle out of the way with a bar, a corner of the nugget was revealed, and its precious nature disclosed to his delighted view, brought to light after a dark entombment of ages. The lucky novices, though charmed no doubt at their discovery, did not permit their wild excitement to overmaster their prudence. One was despatched to the camp for a guard of honor, to escort it to the treasury, and during his absence the others discovered around the bed of the monster a litter of little nuggets, to the value of about three hundred pounds. Thus, in a few hours, those fortunate diggers dug up seven thousand pounds' worth of gold, which enabled them to leave the colony with their piles within a month after their arrival.

[The author, after giving further particulars concerning the diggings, proceeds with a lively description of the methods adopted by the government to collect the license fee charged for mining, and of the miners to avoid its payment.]

I was not permitted to indulge very long in my meditations, for W-l-n shouted down, "Come up, boys,—come along quick,—the game is started!" And as I was being hoisted up I heard the swelling uproar and the loud chorus of "Joes!" [the name given by the miners to the police] from every side. As I gained the surface everybody was in commotion, diggers with their licenses lowering down their mates without them; others, with folded arms, cursing the system and damning the government; some "stealing away" like hares when hounds are in the neighborhood; and several "tally-ho'd," bursting for points where they could escape arrest, while "Joe! Joe! Joe! Joe! Joe! Joe!" resounded on all sides, the half-clad Amazons running up the hill-sides like so many bearers of

the "fiery cross," to spread to the neighboring gullies the commencement of the police foray. The police, acting on a preconcerted plan of attack, kept closing in upon their prey, the mounted portion, under the commander-in-chief commissioner, occupying commanding positions on the elevated ridges to intercept escape or retreat. A strong body of the foot force, fully armed, swept down the gully in extended line, attended by a corps of light infantry traps in loose attire, like greyhounds on the slip, ready to rush from the leash as the quarry started.

But the orders of the officers could not be heard from the loud and continuous roars of "Joe! Joe! Joe!"—"Damn the b—y government!—the beaks, the traps, commissioners, and all,—the robbers, the bushrangers," and every other vile epithet that could be remembered, almost into their ears. At length the excitement got perfectly wild, as a smart fellow, closely pursued by the men-hounds, took a line of the gully cut up with yawning holes, from which the crossing planks had been purposely removed, every extraordinary spring just carrying him beyond the grasp of capture, his tracks being filled the instant he left them, and the outstretched arm of the trap within an inch of seizure in the following leap. I myself was strangely inoculated with the nervous quiver of excitement, and I think I gave an involuntary cheer as the game and mettle of the digger began to tell.

But now arose a terrific menacing outcry of "Shame! shame!—damnation!—treachery!—meanness!" which a glance in the direction of the general gaze showed me was caused by a charge of the mounted men on the high ground to head back the poor fugitive. I really thought a conflict would have ensued, for there was a mad rush to the point where the collision was likely to take place, and fierce vows of vengeance registered by many a stalwart

fellow, who bounded past me to join in the fray. A moment after, the mounted men wheeled at a sharp angle, and a fresh shout arose as another young fellow flew before them with almost supernatural fleetness, like a fresh hare started as the hunted one was on the point of being run down. I marvelled to see him keep the open ground with the gully at his side impracticable for cavalry; but no, he made straight on for a bunch of tents with a speed I never saw equalled by a pedestrian. It was even betting, too, that he would have reached the screen first, when lo! he stopped short so suddenly as only just to escape being ridden down by the commissioner,—the Cardigan of the charge,—who seized him by the shirt-collar in passing.

The rush of diggers now became diverted to the scene of caption. I hurried forward there too, although fearing I should witness the shedding of blood and the sacrifice of human life, but as I approached I was agreeably disappointed at hearing loud roars of laughter, and jeering outbursts of "Joe! Joe!" amidst which the crowd opened out a passage for the crestfallen heroes, who rode away under such a salute of opprobrious epithets as I never heard before, for the young fellow who had led them off the idle chase stopped short the moment he saw the real fugitive was safe, coolly inquiring of his captor "what crime he was guilty of to be hunted like a felon." "Your license, you scoundrel!" was the curt reply. Upon which he put his hand in his pocket and pulled out the document, to the ineffable disgust of their high mightinesses, who, in grasping at the shadow, had lost the substance.

It was a capital ruse, adopted in an emergency, and played with greater skill than if there had been a regular rehearsal. I flatter myself that I am a loyal man on the average, and a respectable upholder of law and order, but I was unable to repress an emotion of gratification at the

result of the chase, or an impulse of hero-worship as I sought the sole actor in the successful diversion to offer my congratulations. The myrmidons of the law now moved up the middle of the gully in close order, attended by anything but an admiring cortège, who made it a point never to let the cry of "Joe! Joe!" subside for a moment. Occasionally a license was demanded, and its production was the signal for fresh outbursts of the tumult; but the "license meet" was brought to a close by two other successful feints that were played off by a pair of diggers, who simulating a guilty timidity, dropped themselves in a slide down their ropes into the bottoms of their wet holes, followed by a brace of traps with dashing gallantry, who chased them into muddy drives, where the lurkers purposely crawled, to lead their pursuers into the muck. Of course they were hauled up in triumph, but the hallelujahs were quickly superseded by choking screams of "Joe! Joe!" when the prisoners produced their digging warrants.

The commissioner did not venture on another "throw off," but moved away sullenly with his forces, to the tune of "Joe! Joe! Joe!" and expressions of regret "that he would have to drink the royal family's health after dinner at his own expense," and such like observations. But the reflection which obtruded itself on me was the absolute loss which accrued to the public by the frequent recurrence of these digger-hunts, in diverting thousands of industrious men from employment, who, at the lowest average of the day, would have produced half an ounce of gold to each hand; which, of course, had its indirect effect on trade and business,—in fact, on the general prosperity of the colony.

THE WHITE AND PINK TERRACES OF NEW ZEALAND.

JAMES ANTHONY FROUDE.

[Many travellers have described those marvels of nature,—now, alas! no more,—the White and Pink Terraces of New Zealand, in their time among the most beautiful of pictures wrought by nature upon the face of the earth. Unfortunately, a few years ago, a volcanic explosion rent the ground in their vicinity, and destroyed in an hour that charming scene which nature had toiled for an age to produce. Nothing remains to indicate their former existence except an occasional description. Of these we select one from the "Oceana" of Froude the historian, who visited Australia and New Zealand in 1885, and was fortunate enough to behold this scene before the hand of ruin was lifted to blot it off the face of the earth. The story of the traveller begins with his arrival at Ohinemutie, the starting-point for the locality of the geysers and terraces.]

OUR immediate business was to visit the famous Terraces, the eighth wonder of the world. . . . The Terraces were twenty-four miles off. We were to drive first through the mountains to a native village which had once been a famous missionary station, called Wairoa. There we were to sleep at an establishment affiliated to the Lake Hotel, and the next day a native boat would take us across Tarawara Lake, a piece of water as large as Rotorua, at the extremity of which the miracle of nature was to be found.

We had brought a letter of introduction from Sir George Grey to the chief of Wairoa,—a very great chief, we learned afterwards, who declined allegiance to the king. It was to his tribe that the Terraces belonged, and to them we were to be indebted for boat and crew and permission to see the place. The sum exacted varied with the number of the party. There were three of us, and we should have four pounds to pay. The tariff is fixed, to limit extortion; the

money goes to the villagers, who make a night of it and get drunk after each expedition.

A native guide, a lady, would attend us and show off the wonders. There was a choice of two, whose portraits we had studied in the Auckland photograph shops. Both were middle-aged. Sophia was small and pretty, she had bright black eyes, with a soft expression, and spoke excellent English. Kate was famous for having once dived after and saved a tourist who had fallen into the water, and had received the Humane Society's medal. We delayed our selection till we had seen these famous rivals.

[The road to Wairoa led through a beautiful forest, with sweet wild strawberries on all its sunny banks.]

At night it is said to be more beautiful than in the day, the fireflies being so many and so brilliant that the glades seem as if lighted up for a festival of the fairies. It is altogether a preternatural kind of place; on emerging from beneath the trees we found ourselves on the edge of a circular lake or basin of beautifully transparent sapphire-colored water, a mile in diameter, with no stream running into it or out of it, and closed completely round with woods, cliffs, and rocky slopes. No boat or canoe floats on its mysterious surface. It is said to contain no living thing save a dragon, which has been seen on sunny days to crawl upon a bank to warm himself. I was reminded instantly of the mountain lake in the "Arabian Nights" where the fisherman drew his net at the bidding of the genius. Here, if anywhere in the world, was the identical spot where the five fish were taken out—red, blue, yellow, purple, and green—who terrified the king's cook by talking in the frying-pan. The dragon might really be there for anything that I could tell; anything might be there, so weird, so enchanted, was the whole scene.

Following the beach for a quarter of a mile, and listening to the voices of the waves which rippled on the shingle, we turned round a shoulder of rock, and saw, a hundred feet below us, and divided from the blue lake by a ridge over which a strong hand might throw a stone, a second lake of a dingy green color,—not enchanted, this one, but merely uncanny-looking. I suppose below both these are mineral springs which account for the tint. Out of the green lake a river did run,—a strong, rapid stream, falling in cataracts down a broken ravine, and overhung by dense clumps of trees with large glossy leaves. The road followed the water into a valley, which opened out at the lower end. There stood Wairoa and its inhabitants.

[Wairoa was not without its attractions. The river that came from the green lake had a cataract of its own, which all visitors were expected to see and pay for seeing.]

The fall itself was worth a visit, being finer perhaps than the finest in Wales or Cumberland. We had to crawl down a steep slippery path through overhanging bushes to look at it from the bottom. The water fell about two hundred feet, at two leaps, broken in the middle by a black mass of rock. Trees started out from the precipices and hung over the torrent. Gigantic and exquisitely graceful ferns stretched forward their waving fronds and dipped them in the spray. One fern especially I noticed, which I had never seen or heard of, which crawls like ivy over the stones, winds round them in careless wreaths, and fringes them with tassels of green.

Returning to the upper regions, we followed a path which ran along the shoulder of a mountain. On our left were high beetling crags, on our right a precipice eight hundred feet deep, with green open meadows below. The river, having escaped out of the gorge, was winding peacefully

through them between wooded banks, a boat-house at the end, and beyond the wide waters of Tarawara, enclosed by a grand range of hills, which soared up blue and beautiful into the evening air. I had rarely looked on a softer and sweeter scene. . . .

We strolled home. On the way I found what I took to be a daisy, and wondered as I had wondered at the pimpernel at Melbourne. It was not a daisy, however, but one of those freaks of nature in which the form of one thing is imitated, one knows not why, by another.

[The next day they started out with Kate for guide, a big, bony, deaf half-caste, with the features and arms of a prize-fighter. She had had eight husbands, who had "died away somehow." However, as Sophia had been out the day before, Kate must go that day,—and despite her looks she proved an excellent guide. They were rowed across the lake, and landed at the mouth of a small river, where a hot spring bubbled up violently through a hole in the rock. Here Kate was joined by a native girl, Marileha by name, who was studying to become a guide.]

We took off our boots and stockings, put on canvas shoes which a wetting would not spoil, and followed our two guides through the bush, waiting for what fate had in store for us, Miss Mari laughing, shouting, and singing to amuse Kate, whose head still ached. After a winding walk of half a mile, we came again on the river, which was rushing deep and swift through reeds and Ti-tree. A rickety canoe was waiting there, in which we crossed, climbed a bank, and stretched before us we saw the White Terrace in all its strangeness; a crystal staircase, glittering and stainless as if it were ice, spreading out like an open fan from a point above us on the hill-side, and projecting at the bottom into a lake, where it was perhaps two hundred feet wide.

The summit was concealed behind the volumes of steam

rising out of the boiling fountain from which the silicious stream proceeded. The stairs were about twenty in number, the height of each being about six or seven feet. The floors dividing them were horizontal, as if laid with a spirit-level. They were of uneven breadth,—twenty, thirty, fifty feet, or even more; each step down being always perpendicular, and all forming arcs of a circle, of which the crater was the centre. On reaching the lake the silica flowed away into the water, where it lay in a sheet half submerged, like ice at the beginning of a thaw.

There was nothing in the fall of the ground to account for the regularity of shape. A crater has been opened through the rock a hundred and twenty feet above the lake. The water, which comes up boiling from below, is charged as heavily as it will bear with silicic acid. The silica crystallizes as it is exposed to the air. The water continues to flow over the hardened surface, continually adding a fresh coating to the deposits already laid down, and, for reasons which men of science can no doubt supply, the crystals take the form which I have described.

The process is a rapid one; a piece of newspaper left behind by a recent visitor was already stiff as the starched collar of a shirt. Tourists ambitious of immortality have pencilled their names and the date of their visit on the white surface over which the stream was running. Some of these inscriptions were six and seven years old, yet the strokes were as fresh as on the day they were made, being protected by the film of glass which was instantly drawn over them.

The thickness of the crust is, I believe, unascertained, the Maories objecting to scientific examination of their treasure. It struck me, however, that this singular cascade must have been of recent—indeed, measurably recent—origin. In the middle of the terrace were the remains

of a Ti-tree bush, which was standing where a small patch of soil was still uncovered. Part of this, where the silica had not reached the roots, was in leaf and alive. The rest had been similarly alive within a year or two, for it had not yet rotted, but had died as the crust rose round it. Clearly nothing could grow through the crust, and the bush was a living evidence of the rate at which it was forming. It appeared to me that this particular staircase was not perhaps a hundred years old, but that terraces like it had successively been formed all along the hill-side as the crater opened now at one spot and now at another.

Wherever the rock showed elsewhere through the soil it was of the same material as that which I saw growing. If the supply of silicic acid was stopped the surface would dry and crack. Ti-trees would then spring up over it. The crystal steps would crumble into less regular outlines, and in a century or two the fairy-like wonder which we were gazing at would be indistinguishable from the adjoining slopes. We walked, or rather waded, upward to the boiling pool; it was not in that we were to be bathed. It was about sixty feet across, and was of unknown depth. The heat was too intense to allow us to approach the edge, and we could see little, from the dense clouds of smoke which lay upon it. We were more fortunate afterwards at the crater of the second Terrace.

The crystallization is ice-like, and the phenomenon, except for the alternate horizontal and vertical arrangement of the deposited silica, is like what would be seen in any northern region when a severe frost suddenly seizes hold of a waterfall before snow has fallen and buried it.

A fixed number of minutes is allotted for each of the "sights." Kate was peremptory with E—— and myself. Miss Marileha had charge of my son. "Come along, boy," I heard her say to him. We were dragged off the White

Terrace in spite of ourselves, but soon forgot it in the many and various wonders which were waiting for us. Columns of steam were rising all round us. We had already heard, near at hand, a noise like the blast-pipe of some enormous steam-engine. Climbing up a rocky path through the bush, we came on a black gaping chasm, the craggy sides of which we could just distinguish through the vapor. Water was boiling furiously at the bottom, and it was as if a legion of imprisoned devils were roaring to be let out. "Devil's Hole" they called the place, and the name suited well with it.

Behind a rock a few yards distant we found a large open pool, boiling also so violently that great volumes of water heaved and rolled and spouted, as if in a gigantic saucepan standing over a furnace. It was full of sulphur. Heat, noise, and smell were alike intolerable. To look at the thing, and then escape from it, was all that we could do, and we were glad to be led away out of sight and hearing.

Again a climb, and we were on an open level plateau, two acres or so in extent, smoking rocks all round it, and, scattered over its surface, a number of pale brown mud-heaps, exactly like African ant-hills. Each of these was the cone of some sulphurous geyser. Some were quiet, some were active. Suspicious bubbles of steam spurted out under our feet as we trod, and we were warned to be careful where we went. Here we found a photographer, who had bought permission from the Maories, at work with his instruments, and Marileha was made to stand for her likeness on the top of one of the mud piles. We did not envy him his occupation, for the whole place smelt of brimstone and of the near neighborhood of the Nether Pit.

Our own attention was directed particularly to a hole filled with mud of a peculiar kind, much relished by the

natives, and eaten by them as porridge. To us, who had been curious about their food, this dirty mess was interesting. It did not, however, solve the problem. Mud could hardly be so nutritious as they professed to find it, though it may have had medicinal virtues to assist the digestion of crayfish.

The lake into which the Terrace descended lay close below us. It was green and hot (the temperature near 100°), patched over with beds of rank reed and rush, which were forced into unnatural luxuriance. After leaving the mud-heaps we went to the water-side, where we found our luncheon laid out in an open-air saloon, with a smooth floor of silica, and natural slabs of silica ranged round the sides as benches. Steam fountains were playing in half a dozen places. The floor was hot,—a mere skin between us and Cocytus. The slabs were hot, just to the point of being agreeable to sit upon. This spot was a favorite winter resort of the Maori,—their palavering hall, where they had their constitutional debates, their store-room, their kitchen, and their dining-room. Here they had their innocent meals on dried fish and fruit, here also their less innocent, on dried slices of their enemies. . . .

We were now to be ferried across the lake. The canoe had been brought up,—a scooped-out tree-trunk, as long as a racing eight-oar, and about as narrow. It was leaky, and so low in the water that the lightest ripple washed over the gunwale. The bottom, however, was littered with fresh-gathered fern, which for the present was dry, and we were directed to lie down upon it. Marileha stood in the bow, wielding her paddle, with her elf locks rolling wildly down her back. The hot waves lapped in and splashed us. The lake was weird and evil-looking. Here Kate had earned her medal. Some gentleman, unused to boats, had lost his balance, or his courage, and had fallen

overboard. Kate had dived after him as he sank, and fished him up again.

The Pink Terrace, the object of our voyage, opened out before us on the opposite shore. It was formed on the same lines as the other, save that it was narrower, and was flushed with pale-rose color. Oxide of iron is said to be the cause, but there is probably something besides. The water has not, I believe, been completely analyzed. Miss Mari used her paddle like a mistress. She carried us over with no worse misfortune than a light splashing, and landed us at the Terrace foot.

[Here they were delivered over to the care of a Maori youth, who was to lead them to a bathing pool.]

The youth took charge of us, and led us up the shining stairs. The crystals were even more beautiful than those which we had seen, falling like clusters of rosy icicles, or hanging in festoons like creepers trailing from a rail. At the foot of each cascade the water lay in pools of ultramarine, their exquisite color being due, in part, I suppose, to the light of the sky refracted upward from the bottom.

In the deepest of these we were to bathe. The temperature was 94° or 95°. The water lay inviting in its crystal basin. E—— declined the adventure. I and A—— hung our clothes on a Ti-bush and followed our Maori, who had already plunged in, being unencumbered, except with a blanket, to show us the way. His black head and copper shoulders were so animal-like that I did not altogether admire his company; but he was a man and a brother, and I knew that he must be clean, at any rate, poor fellow, from perpetual washing. The water was deep enough to swim in comfortably, though not over our heads. We lay on our backs and floated for ten minutes in exquisite enjoyment, and the alkali, or the flint, or the perfect purity of

the element, seemed to saturate our systems. I, for one, when I was dressed again, could have fancied myself back in the old days when I did not know that I had a body, and could run up hill as lightly as down.

The bath over, we pursued our way. The marvel of the Terrace was still before us, reserved to the last, like the finish in a pheasant battue. The crater at the White Terrace had been boiling; the steam rushing out of it had filled the air with cloud; and the scorching heat had kept us at a distance. Here the temperature was twenty degrees lower; there was still vapor hovering over the surface, but it was lighter and more transparent, and a soft breeze now and then blew it completely aside. We could stand on the brim and gaze as through an opening in the earth into an azure infinity beyond. Down and down, and fainter and softer as they receded, the white crystals projected from the rocky wall over the abyss, till they seemed to dissolve not into darkness but into light. The hue of the water was something which I had never seen, and shall never again see on this side of eternity. Not the violet, not the harebell, nearest in its tint to heaven of all nature's flowers; not turquoise, not sapphire, not the unfathomable ether itself, could convey to one who had not looked on it a sense of that supernatural loveliness. Comparison could only soil such inimitable purity. The only color I ever saw in sky or on earth the least resembling the aspect of this extraordinary pool was the flame of burning sulphur. Here was a bath, if mortal flesh could have borne to dive into it! Had it been in Norway, we should have seen far down the floating Lorelei, inviting us to plunge and leave life and all belonging to it for such a home and such a companionship. It was a bath for the gods and not for man. Artemis and her nymphs should have been swimming there, and we Actæons daring our fate to gaze on them.

This was the end of our adventure,—a unique experience. There was nothing more to see, and any more vulgar wonders would now have been too tame to interest us. [They returned to the canoe, and were rowed over the lake and down the river.] Flights of ducks rose noisily out of the reed-beds. Cormorants wheeled above our heads. Great water-hens, with crimson heads and steadfast eyes, stared at us as we went by. The stream, when we struck into it, ran deep and swift and serpentine, low-hidden between flags and bushes. It was scarcely as broad as our canoe was long, and if we had touched the bank anywhere we should have been overturned. Spurts of steam shot out at us from holes in the banks. By this time it seemed natural that they should be there as part of the constitution of things. In a few minutes we were at the spot where we had landed in the morning.

[Rousing their sleeping rowers, they launched once more on the waters of Lake Tarawara, and in two hours more were climbing the hill-side path to Wairoa. That evening the village spent in drunken orgies, the four pounds paid by the travellers being all converted into whiskey. The ending of this vile custom is the only alleviation which the world possesses for the volcanic destruction of the Terraces.]

ON A SOUTH SEA ISLAND.

CAPTAIN JAMES COOK.

[The islands of the South Pacific have been the scenes of many adventurous voyages and the subject of much interesting description in the early days of oceanic discovery. And of these daring adventurers the best known is the famous Captain Cook, who made several voyages to the southern seas, and during the last of these was killed by the natives on the Sandwich Islands, February 14, 1779. We have

chosen from the narrative of this last voyage a description of the discovery of a hitherto unknown island, Wateeoo, and of the habits and actions of the natives. Omai, spoken of in this account, was a native of the Friendly Islands, who had been in England and was being taken home by Captain Cook.]

After leaving Mangeea [a new-discovered island, lying several days' sail northeast of New Zealand], on the afternoon of the 30th [of March, 1777], we continued our course northward all that night, and till noon of the 31st, when we again saw land, in the direction of northeast by north, distant eight or ten leagues.

Next morning, at eight o'clock, we had got abreast of its north end, within four leagues of it, but to leeward, and could now pronounce it to be an island, nearly of the same appearance and extent with that we had so lately left. At the same time another island, but much smaller, was seen right ahead. We could have soon reached this; but the largest one had the preference, as being most likely to furnish a supply of food for the cattle, of which we began to be in great want.

With this view I determined to work up to it; but as there was but little wind, and that little was unfavorable, we were still two leagues to leeward at eight o'clock the following morning. Soon after, I sent two armed boats from the "Resolution" and one from the "Discovery," under the command of Lieutenant Gore, to look for anchoring-ground and a landing-place. In the mean time we plied up under the island with the ships.

Just as the boats were putting off, we observed several single canoes coming from the shore. They went first to the "Discovery," she being the nearest ship. It was not long after when three of these canoes came alongside of the "Resolution," each conducted by one man. They are long and narrow, and supported by outriggers. The stern

is elevated about three or four feet, something like a ship's stern-post. The head is flat above, but prow-like below, and turns down at the extremity like the end of a violin. Some knives, beads, and other trifles were conveyed to our visitors, and they gave us a few cocoanuts upon our asking for them. But they did not part with them by way of exchange for what they had received from us. For they seemed to have no idea of bartering, nor did they appear to estimate any of our presents at a high rate.

With a little persuasion, one of them made his canoe fast to the ship and came on board; and the other two, encouraged by his example, soon followed him. Their whole behavior marked that they were quite at their ease, and felt no sort of apprehension of our detaining or using them ill.

After their departure another canoe arrived, conducted by a man who brought a bunch of plantains as a present to me; asking for me by name, having learnt it from Omai, who was sent before us in the boat with Mr. Gore. In return for this civility I gave him an axe and a piece of red cloth, and he paddled back to the shore well satisfied. I afterwards understood from Omai that this present had been sent from the king or principal chief of the island.

Not long after, a double canoe, in which were twelve men, came towards us. As they drew near the ship they recited some words in concert, by way of chorus, one of their number first standing up and giving the word before each repetition. When they had finished their solemn chant, they came alongside and asked for the chief. As soon as I showed myself, a pig and a few cocoanuts were conveyed up into the ship, and the principal person in the canoe made me an additional present of a piece of matting as soon as he and his companions got on board.

Our visitors were conducted to the cabin and to other parts of the ship. Some objects seemed to strike them

with a degree of surprise, but nothing fixed their attention for a moment. They were afraid to come near the cows and horses, nor did they form the least conception of their nature. But the sheep and goats did not surpass the limits of their ideas; for they gave us to understand that they knew them to be birds. It will appear rather incredible that human ignorance could ever make so strange a mistake, there not being the most distant similitude between a sheep or goat and any winged animal. But these people seemed to know nothing of the existence of any other land-animals besides hogs, dogs, and birds. Our sheep and goats, they could see, were very different animals from the two first, and therefore they inferred that they must belong to the latter class, in which they knew there is a considerable variety of species. I made a present to my new friend of what I thought might be most acceptable to him; but on his going away he seemed rather disappointed than pleased. I afterwards understood that he was very desirous of obtaining a dog, of which animal this island could not boast, though the inhabitants knew that the race existed in other islands of their ocean. Captain Clerke had received the same present with the same view from another man, who met with from him the like disappointment.

The people in these canoes were in general of a middling size, and not unlike those of Mangeea; though several were of a blacker cast than any we saw there. Their hair was tied on the crown of the head, or flowing loose about the shoulders; and though in some it was of a frizzling disposition, yet, for the most part, that, as well as the straight sort, was long. Their features were various, and some of the young men rather handsome. Like those of Mangeea they had girdles of glazed cloth, or fine matting, the ends of which, being brought betwixt the thighs, covered the adjoining parts. Ornaments, composed of a

sort of broad grass, stained with red, and strung with berries of the nightshade, were worn about their necks. Their ears were bored, but not slit; and they were punctured upon the legs, from the knee to the heel, which made them appear as if they wore a kind of boots. They also resembled the inhabitants of Mangeea in the length of their beards, and, like them, wore a sort of sandals upon their feet. Their behavior was frank and cheerful, with a great deal of good nature.

[On the next day Mr. Gore was sent on shore, to learn if food could be had for the cattle. Omai went with him as interpreter. A dog, the property of Omai, was also sent them. The story of what happened is told by Mr. Anderson, one of the four persons who landed.]

Mr. Burney, the first lieutenant of the "Discovery," and I, went in one canoe, a little time before the other; and our conductors, watching attentively the motions of the surf, landed us safely upon the reef. An islander took hold of each of us, obviously with an intention to support us in walking, over the rugged rocks, to the beach, where several of the others met us, holding the green boughs of a species of mimosa in their hands, and saluted us by applying their noses to ours.

We were conducted from the beach by our guides amidst a great crowd of people, who flocked with very eager curiosity to look at us; and would have prevented our proceeding, had not some men, who seemed to have authority, dealt blows, with little distinction, among them, to keep them off. We were then led up an avenue of cocoa-palms; and soon came to a number of men, arranged in two rows, armed with clubs, which they held on their shoulders, much in the manner we rest a musquet.

After walking a little way among these, we found a person who seemed a chief, sitting on the ground cross-

legged, cooling himself with a sort of triangular fan, made of a leaf of the cocoa-palm, with a polished handle, of black wood, fixed to one corner. In his ears were large bunches of beautiful red feathers, which pointed forward. But he had no other mark or ornament to distinguish him from the rest of the people, though they all obeyed him with the greatest alacrity. He either naturally had, or at this time put on, a serious, but not severe countenance; and we were desired to salute him as he sat, by some people who seemed of consequence.

We proceeded still among the men armed with clubs, and came to a second chief, who sat fanning himself, and ornamented as the first. He was remarkable for his size and uncommon corpulence, though, to appearance, not above thirty years of age. In the same manner we were conducted to a third chief, who seemed older than the two former, and, though not so fat as the second, was of a large size. He also was sitting, and adorned with red feathers; and after saluting him as we had done the others, he desired us both to sit down. Which we were very willing to do, being pretty well fatigued with walking up, and with the excessive heat we felt among the vast crowd that surrounded us.

In a few minutes the people were ordered to separate; and we saw, at the distance of thirty yards, about twenty young women, ornamented as the chiefs with red feathers, engaged in a dance, which they performed to a slow and serious air, sung by them all. We got up and went forward to see them; and though we must have been strange objects to them, they continued their dance, without paying the least attention to us. They seemed to be directed by a man who served as a prompter, and mentioned each motion they were to make. But they never changed the spot, as we do in dancing, and though their feet were not

at rest, this exercise consisted more in moving the fingers very nimbly, at the same time holding their hands in a prone position near the face, and now and then also clapping them together.

Their motions and song were performed in such exact concert, that it should seem they had been taught with great care; and probably they were selected for this ceremony, as few of those whom we saw in the crowd equalled them in beauty. In general they were rather stout than slender, with black hair flowing in ringlets down the neck, and of an olive complexion. Their features were rather fuller than what we allow to perfect beauties, and much alike; but their eyes were of a deep black, and each countenance expressed a degree of complacency and modesty peculiar to the sex in every part of the world, but perhaps more conspicuous here where Nature presented us with her productions in the fullest perfection, unbiassed in sentiment by custom, or unrestrained in manner by art. Their shape and limbs were elegantly formed. For as their dress consisted only of a piece of glazed cloth fastened about the waist and scarcely reaching so low as the knees, in many we had an opportunity of observing every part. This dance was not finished when we heard a noise as if some horses had been galloping towards us; and, on looking aside, we saw the people armed with clubs, who had been desired, as we supposed, to entertain us with the sight of their manner of fighting. This they now did, one party pursuing another who fled.

As we supposed the ceremony of being introduced to the chiefs was at an end, we began to look about for Mr. Gore and Omai; and, though the crowd would hardly suffer us to move, we at length found them coming up, as much incommoded by the number of people as we had been, and introduced in the same manner to the three

chiefs, whose names were Otteroo, Taroa, and Fatouweera. Each of these expected a present; and Mr. Goro gave them such things as he had brought with him from the ship for that purpose. After this, making use of Omai as his interpreter, he informed the chiefs with what intention we had come on shore, but was given to understand that he must wait till the next day, and then he should have what was wanted.

They now seemed to take some pains to separate us from each other, and every one of us had his circle to surround and gaze at him. For my own part, I was, at one time, above an hour apart from my friends; and when I told the chief with whom I sat that I wanted to speak to Omai, he peremptorily refused my request. At the same time I found the people began to steal several trifling things which I had in my pocket; and when I took the liberty of complaining to the chief of this treatment, he justified it. From these circumstances I now entertained apprehensions that they might have formed the design of detaining us among them. They did not, indeed, seem to be of a disposition so savage as to make us anxious for the safety of our persons; but it was, nevertheless, vexing to think we had hazarded being detained by their curiosity.

In this situation I asked for something to eat, and they readily brought to me some cocoanuts, bread-fruit, and a sort of sour pudding, which was presented by a woman. And on my complaining much of the heat, occasioned by the crowd, the chief himself condescended to fan me, and gave me a small piece of cloth which he had round his waist.

Mr. Burney happening to come to the place where I was, I mentioned my suspicions to him, and, to put it to the test whether they were well founded, we attempted to get

to the beach. But we were stopped, when about half-way, by some men, who told us that we must go back to the place we had left. On coming up we found Omai entertaining the same apprehensions. But he had, as he fancied, an additional reason for being afraid, for he had observed that they had dug a hole in the ground for an oven, which they were now heating; and he could assign no other reason for this than that they meant to roast and eat us, as is practised by the inhabitants of New Zealand. Nay, he went so far as to ask them the question, at which they were greatly surprised, asking, in return, whether that was a custom with us. Mr. Burney and I were rather angry that they should be thus suspected by him, there having, as yet, been no appearances, in their conduct towards us, of their being capable of such brutality.

In this manner we were detained the greatest part of the day, being sometimes together and sometimes separated, but always in a crowd, who, not satisfied with gazing at us, frequently desired us to uncover parts of our skin, the sight of which commonly produced a general murmur of admiration. At the same time they did not omit these opportunities of rifling our pockets, and at last one of them snatched a small bayonet from Mr. Gore, which hung in its sheath by his side. This was represented to the chief, who pretended to send some person in search of it. But, in all probability, he countenanced the theft, for, soon after, Omai had a dagger stolen from his side in the same manner, though he did not miss it immediately.

Whether they observed any signs of uneasiness in us, or that they voluntarily repeated their emblems of friendship when we expressed a desire to go, I cannot tell; but at this time they brought some green boughs, and, sticking their ends in the ground, desired we might hold them as we sat. Upon our urging again the business we came

upon, they gave us to understand that we must stay and eat with them; and a pig which we saw soon after, lying near the oven, which they had prepared and heated, removed Omai's apprehensions of being put into it himself, and made us think it might be intended for our repast. The chief also promised to send some people to procure food for the cattle; but it was not till pretty late in the afternoon that we saw them return with a few plantain-trees, which they carried to our boats.

In the mean time Mr. Burney and I attempted again to go to the beach; but when we arrived, found ourselves watched by people who, to appearance, had been placed there for this purpose. For when I tried to wade in upon the reef, one of them took hold of my clothes and dragged me back. I picked up some small pieces of coral, which they required me to throw down again, and on my refusal they made no scruple to take them forcibly from me. I had gathered some small plants, but these also I could not be permitted to retain, and they took a fan from Mr. Burney which he had received as a present on coming ashore. Omai said we had done wrong in taking up anything, for it was not the custom here to permit freedoms of that kind to strangers till they had in some measure naturalized them to the country by entertaining them with festivity for two or three days.

Finding that the only method of procuring better treatment was to yield implicit obedience to their will, we went up again to the place we had left; and they now promised that we should have a canoe to carry us off to our boats, after we had eaten of a repast which had been prepared for us.

Accordingly, the second chief to whom we had been introduced in the morning, having seated himself upon a low, broad stool of blackish, hard wood, tolerably polished, and

directing the multitude to make a pretty large ring, made us sit down by him. A considerable number of cocoanuts were now brought, and, shortly after, a long green basket, with a sufficient quantity of baked plantains to have served a dozen persons. A piece of the young hog that had been dressed was then set before each of us, of which we were desired to eat. Our appetites, however, had failed, from the fatigue of the day, and though we did eat a little to please them, it was without satisfaction to ourselves.

It being now near sunset, we told them it was time to go on board. This they allowed, and sent down to the beach the remainder of the victuals that had been dressed, to be carried with us to the ships. But before we set out Omai was treated with a drink he had been used to in his own country, which, we observed, was made here, as at other islands in the South Sea, by chewing the root of a sort of pepper. We found a canoe ready to put us off to our boats, which the natives did with the same caution as when we landed. But even here their thievish disposition did not leave them; for a person of some consequence among them, who came with us, took an opportunity, just as they were pushing the canoe into the surf, to snatch a bag out of her, which I had, with the greatest difficulty, preserved all the day, there being in it a small pocket-pistol which I was unwilling to part with. Perceiving him, I called out, expressing as much displeasure as I could; on which he thought proper to return and swim with the bag to the canoe, but denied he had stolen it, though detected in the very act. They put us on board our boats, with the cocoanuts, plantains, and other provisions which they had brought, and we rowed to the ships, very well pleased that we had at last got out of the hands of our troublesome masters.

TAHITI AND OTHER PACIFIC ISLANDS.

LADY ANNE BRASSEY.

[A yacht journey round the world, with the provision for comfort which a pleasure yacht affords, must be an enjoyable trip; and can be made enjoyable to others if the traveller have quick eyes to observe and ready pen to write. Mrs. Brassey's "Round the World in the Yacht Sunbeam" is such a record, and we copy from her interesting narrative some of her observations in Tahiti and other South Sea islands.]

WE passed Anaa, or Chain Island, in the morning watch, before daybreak. I came on deck to try and get a glimpse of it, and was rewarded by a glorious sunrise. We had a nice eight-knot breeze and a strong current in our favor, and just before breakfast Tom descried from the mast-head Amanu, or Möller Island, which we had hardly expected to make before ten or eleven o'clock. Some one remarked that it seemed almost as if it had come out to meet us. The reef encircling this island varies much in height and vegetation. In some places it supports a noble grove of trees, in others the sea breaks over the half submerged coral bed, the first obstacle it has met for four thousand miles, with a roar like thunder.

Before we lost sight of Amana, the island of Hao Harpe, or Bow Island, was visible on our port bow. . . . After lunch we hove to, and the gig's crew were ordered to arm themselves with revolvers and rifles, which they were not to show unless required to do so. All the gentlemen had revolvers, and Mabelle and I were also provided with two small ones, Phillips and Muriel being the only unarmed members of the party. I took a bag-full of beads, knives, looking-glasses, and pictures for barter and presents, and

with these preparations we set off to make our first personal acquaintance with the islanders of the South Pacific. . . .

It is really impossible to describe the beauty of the scene before us [in the tranquil lagune which they entered]. Submarine coral forests, of every color, studded with sea-flowers, anemones, and echinidæ, of a brilliancy only to be seem in dreamland; shoals of the brightest and swiftest fish darting and flashing in and out; shells, every one of which was fitted to hold the place of honor in a conchologist's collection, moving slowly along with their living inmates: this is what we saw when we looked down, from the side of the boat, into the depths below. The surface of the water glittered with every imaginable tint, from the palest aqua-marine to the brightest emerald, from the pure light blue of the turquoise to the deep dark blue of the sapphire, and was dotted here and there with patches of red, brown, and green coral, rising from the mass below. Before us, on the shore, there spread the rich growth of tropical vegetation, shaded by palms and cocoanuts, and enlivened by the presence of native women in red, blue, and green garments, and men in motley costumes, bringing fish, fowls, and bunches of cocoanuts, borne, like the grapes brought back from the land of Canaan by the spies, on poles.

As soon as we touched the shore, the men rushed forward to meet us, and to shake hands, and, having left the muskets and revolvers judiciously out of sight in the boat, we were conducted to a cluster of huts, made of branches, or rather leaves, of the palm-tree, tied by their foot-stalks across two poles, and hanging down to the ground. Here we were met by the women and children, who likewise all went through the ceremony of shaking hands with us, after which the head-woman, who was very good-looking,

and was dressed in a cherry-colored calico gown, with two long plaits of black hair hanging down her back, spread a mat for me to sit upon just outside the hut. Most of the women were good-looking, with dark complexions and quantities of well-greased, neatly plaited, black hair, but we did not see a single young girl, though there were plenty of children and babies, and lots of boys, the latter of whom, like some of the older women, had only a piece of palm matting round their loins. We therefore came to the conclusion that the girls must have been sent away intentionally when the approach of the yacht was observed.

As soon as I was seated, the head-woman told one of the men to knock down some cocoanuts from the trees close by, and after cutting off the ends she offered us a drink of the fresh cool milk, which was all the sweeter and better for the fact that the nuts were not nearly ripe. While this was going on the natives brought piles of cocoanuts, fish, and fowls, and laid them at our feet as a present. Some of the fish were of a dark-brown color, like bream, others were long and thin, with a pipe-like nose and four fins, somewhat resembling the wings of a flying-fish.

Seeing smoke in the distance, rising from under some high palm-trees, we thought we should like to go and see whence it proceeded, and accordingly set off to walk through a sort of bush, over sharp coral that cut one's boots terribly, the sun blazing down on us fiercely all the time, until we reached a little settlement, consisting of several huts, the inhabitants of which were absent. Fine plaited mats for beds, cocoanut shells for cups, mother-of-pearl shells for plates, and coral, of various kinds and shapes, for dishes and cooking utensils, formed their only furniture.

We saw three women, one very old, with nothing but a palm-leaf mat as a covering, the others dressed in the ap-

parently universal costume, consisting of a long, bright-colored gown, put into a yoke at the shoulders, and flowing thence loosely to the ground, which completely conceals the wearer's form, even to the tips of her toes. I think these dresses must have come from England or America, for they are evidently machine-made, and the cotton stuff of which they are composed has the most extraordinary patterns printed on it I ever saw. Cherry and white, dark blue and yellow or white stripes, red with yellow spots, and blue with yellow crosses, appear to be the favorite designs. The women seemed gentle and kind, and were delighted with some beads, looking-glasses, and knives I gave them, in return for which they brought us quantities of beautiful shells. . . .

The only animals we met with in our ramble were four pigs and a few chickens, and no other live-stock of any kind was visible. No attempt seemed to be made at the cultivation of the ground. . . . On our way back to the huts we peeped into several of the canoes drawn up on the beach, in which were some fish-spears, and a fish-hook nearly three inches long, made of solid mother-of-pearl, the natural curve of the shell from which it was cut being preserved. A piece of bone was securely fastened to it by means of some pig's hair, but there was no bait, and it seems that the glitter of the mother-of-pearl alone serves as a sufficient allurement to the fish. . . .

The cocoanuts, fowls, fish, coral, etc., having been put into our boat, we shook hands with the friendly islanders and embarked, and having rounded the point we soon found ourselves again in the broken water outside the lagune, where the race of the tide and the overfall [of water flowing over the coral reef] were now much more violent than they had been when we landed. If we had once been drawn into the current, we should have stood a good chance

of being knocked to pieces on the coral reefs, strong as our boat was; but the danger was happily avoided, and we reached the yacht safely, much to Tom's relief.

[The reception here described signifies that civilization has made a fair degree of progress in the South Sea islands. The time was, not so long ago, when the armament they took with them would have been more useful than on this occasion, and when they would not have found the natives dressed in painted calicoes. They landed, two days afterwards, on another island, named Maitea, where they were similarly received, though the natives were at a loss to account for their visit. "'No sell brandy?'—'No.' 'No stealy man?'—'No.' 'No do what, then?'" Their experience of civilized mankind had evidently not been encouraging. On the next day—December 2, 1876—the island of Tahiti was reached, and the "Sunbeam" dropped anchor in the harbor of Papiete.]

A couple of hours later, by which time the weather had cleared, we went ashore, and at once found ourselves in the midst of a fairy-like scene, to describe which is almost impossible, so bewildering is it in the brightness and variety of its coloring. The magnolias and yellow and scarlet hibiscus, overshadowing the water, the velvety turf, on to which one steps from the boat, the white road running between rows of wooden houses, whose little gardens are a mass of flowers, the men and women clad in the gayest robes and decked with flowers, the piles of unfamiliar fruit lying on the grass, waiting to be transported to the coasting vessel in the harbor, the wide-spreading background of hills clad in verdure to their summits,—these are but a few of the objects which greet the new-comer in his first contact with the shore.

The streets of Papiete, running back at right angles with the beach, seem to have wonderfully grand names, such as the Rue de Rivoli, Rue de Paris, etc. Every street is shaded by an avenue of high trees, whose branches meet

and interlace overhead, forming a sort of leafy tunnel, through which the sea breeze passes refreshingly. The French commandant lives in a charming residence, surrounded by gardens, just opposite the palace of Queen Pomare, who is at present at the island of Bola-Bola, taking care of her little grandchild, aged five, the queen of the island. . . .

At five in the afternoon we went for a row in the "Glance" and the "Flash" [two of the yacht's boats] to the coral reef, now illumined by the rays of the setting sun. Who can describe these wonderful gardens of the deep, on which we now gazed through ten and twenty fathoms of crystal water? Who can enumerate or describe the strange creatures moving about and darting hither and thither, amid the masses of coral forming their submarine home? There were shells of rare shape, brighter than if they had been polished by the hand of the most skilful artist; crabs of all sizes, scuttling and sidling along; sea-anemones, spreading their delicate feelers in search of prey; and many other kinds of zoophytes, crawling slowly over the reef; and scarlet, blue, yellow, gold, violet, spotted, striped, and winged fish, short, long, pointed, and blunted, of the most varied shapes, were darting about like birds among the coral trees. . . .

The shades of night compelled us to return to the yacht, laden with corals of many different species. After dinner the bay was illuminated by the torches of the native fishermen, in canoes, on the reef. Tom and I went to look at them, but did not see them catch anything. Each canoe contained at least three people, one of whom propelled the boat, another stood up waving a torch dipped in some resinous substance, which threw a strong light on the water, while the third stood in the bows, armed with a spear, made of a bundle of wires tied to a long pole, not at

all unlike a gigantic egg-whip, with all its loops cut into points. This is aimed with great dexterity at the fish, who are either transfixed or jammed between the prongs. The fine figures of the natives, lighted up by the flickering torches, and standing out in bold relief against the dark-blue, starlit sky, would have served as models for the sculptors of ancient Greece.

Sunday, December 3.—At a quarter of five this morning some of us landed to see the market, this being the great day when the natives come in from the country and surrounding villages, by sea and by land, in boats or on horseback, to sell their produce and buy necessaries for the coming week. We walked through the shady streets to the two covered market buildings, partitioned across with great bunches of oranges, plantains, and many-colored vegetables, hung on strings. The mats, beds, and pillows still lying about suggested the idea that the sales men and women had passed the night among their wares. The gayly-attired, good-looking, flower-decorated crowd, of some seven or eight hundred people, all chatting and laughing, and some staring at us,—but not rudely,—looked much more like a chorus of opera-singers, dressed for their parts in some grand spectacle, than ordinary market-going peasants.

Whichever way one turned, the prospect was an animated and attractive one. Here, beneath the shade of large, smooth, light-green banana-leaves, was a group of earnest bargainers for mysterious looking fish, luscious fruit, and vegetables; there, sheltered by a drooping mango, whose rich clusters of purple and orange fruit hung in tempting proximity to lips and hands, another little crowd was similarly engaged. Orange-trees were evidently favorite *rendezvous;* and a row of flower-sellers had established themselves in front of a hedge of scarlet hibiscus and double cape-jasmine. Every vender carries his stock-in-trade,

however small the articles composing it might be, on a bamboo pole, across his shoulder, occasionally with rather ludicrous effect; as, for instance, when the thick but light pole supported only a tiny fish six inches long at one end, and two mangoes at the other. Everybody seemed to have brought to market just what he or she happened to have on hand, however small the quantity. The women would have one, two, or three new-laid eggs in a leaf basket, one crab or lobster, three or four prawns, or one little trout. Under these circumstances, marketing for so large a party as ours was a somewhat lengthy operation, and I was much amused in watching our *provedor*, as he went about collecting things by ones or twos, until he had piled a little cart quite full, and had it pushed off to the shady quay. . . .

After service [in the native church] we drove through the shady avenues of the town into the open country, past trim little villas and sugar-cane plantations, until we turned off the main road and entered an avenue of mangoes, whence a rough road, cut through a guava thicket, leads to the main gate of Fautahua,—a regular square Indian bungalow, with thatched roof, verandas covered with creepers, windows opening to the ground, and steps leading to the gardens on every side, ample accommodation for stables, kitchens, servants, being provided in numerous outbuildings.

Soon after breakfast, Mrs. Brander dressed me in one of her own native costumes, and we drove to the outskirts of a dense forest, through which a foot-path leads to the waterfall and fort of Fautahua. Here we found horses waiting for us, on which we rode, accompanied by the gentlemen on foot, through a thick growth of palms, orange-trees, guavas, and other tropical trees, some of which were overhung and almost choked by luxuriant creepers. Specially noticeable among the latter was a gor-

geous purple passion-flower, with orange-colored fruit as big as pumpkins, that covered everything with its vigorous growth. The path was always narrow, and sometimes steep, and we had frequently almost to creep under the overhanging boughs, or to turn aside to avoid a more than usually dense mass of creepers.

We crossed several small rivers, and at last reached a spot that commanded a view of the waterfall, on the other side of a deep ravine. Just below the fort that crowns the height a river issues from a narrow cleft in the rock, and falls at a single bound from the edge of an almost perpendicular cliff, six hundred feet high, into the valley beneath. First, one sees the rush of blue water, gradually changing in its descent into a cloud of white spray, which in its turn is lost in a rainbow of mist. Imagine that from beneath the shade of feathery palms and broad-leaved bananas, through a net-work of ferns and creepers, you are looking upon the Staubbach, in Switzerland, magnified in height, and with a background of verdure-clad mountains, and you will have some idea of the fall of Fautahua as we beheld it.

After resting a little while and taking some sketches, we climbed up to the fort itself, a place of considerable interest, where the natives held out to the very last against the French. On the bank opposite the fort the last islander killed during the struggle for independence was shot while trying to escape. Situated in the centre of a group of mountains, with valleys branching off in all directions, the fort could hold communication with every part of the coast; and there can be little doubt that it would have held out much longer than it did but for the treachery of one of the garrison, who led the invaders, under cover of the night, and by devious paths, to the top of a hill commanding the position. Now the ramparts and earthworks are overrun and almost hidden by roses. Originally planted, I

suppose, by the new-comers, they have spread rapidly in all directions, till the hill-sides and summits are quite a-blush with the fragrant bloom.

Having enjoyed some strawberries and some icy-cold water from a spring, and heard a long account of the war from the *gardiens*, we found it was time to commence our return journey, as it was now getting late. We descended much more quickly than we had come up, but daylight had faded into the brief tropical twilight, and that again into the shades of night, ere we reached the carriage.

Dinner and evening service brought the day to a conclusion, and I retired, not unwillingly, to bed to dream of the charms of Tahiti.

SEA AND LAND IN FIJI.

C. F. GORDON CUMMING.

[Of the celebrated tropical island of Fiji, since 1874 an appanage of the far-reaching British empire, we have here to give no moving adventures "by flood or field," but a simple description of the charms of nature in this lovely island-gem of the southern seas. Miss Cumming's "At Home in Fiji" is couched in the form of letters to friends in England. What is to be seen in the waters surrounding the island is so well told in the following epistle that we give it in whole.]

DEAR NELL,—I cannot say how I long to have you here to share the delight of sitting on this high headland overlooking the lovely sea. The air is balmy, and we almost always have a faint delicious breeze (sometimes it is anything but faint). From this tiny garden we look down through a veil of glittering palm-leaves, brightened by a foreground of rosy oleanders and vivid scarlet hibiscus; and between these glimmer the blue waters of the Pacific,

and dreamy isles which seem to float on the horizon. I think, on a clear day, we can count eight or ten of these.

Just below us lies the harbor, like a calm sea-lake, on which ride vessels of all sizes,—trading schooners and brigs, which carry the produce of the isles to Australia and New Zealand. Larger vessels trade with Germany. Then there is an occasional man-of-war or merchant steamer, and always native canoes passing to and fro, with great three-cornered yellow mat sails, and brown men, who often sing quaint *mékés* as they approach the town, with an odd sort of accompaniment on their *lali*, or wooden drum. The chief's canoes carry a flag, and sometimes a fringe of streamers of native cloth floating from the sail; and the canoe itself is adorned at both ends with glistening white shells like poached eggs (Cyprea oviformis). Sometimes several canoes pass us racing, or they meet, and their sails at different angles form pretty groups.

How striking a scene it must have been when, in the old days, the chiefs sailed forth to war at the head of a large fleet of these! On one such occasion, when Thakombau went to attack Verota, he mustered a hundred and twenty-nine canoes. Only think how bravely they must have flown before the breeze, with the golden sunlight on the yellow sails! These canoes are balanced by large outriggers,—that is, a beam of wood, or piece of cocoa-palm stem, floating alongside, and attached to the canoe by bamboos. They are most picturesque, and the great mat sails, seen against the intense blue of the water, are a valuable addition to the scene. Indeed, the eye that loves exquisite color can never weary here.

The rich blue of the harbor is separated from the purplish indigo of the great ocean by a submarine rainbow of indescribable loveliness. This is caused by the coral reef, which produces a gleaming ray as if from a hidden prism.

The patches of coral, sea-weed, and sometimes white sand, lying at irregular depths, beneath a shallow covering of the most crystalline emerald-green water, produce every shade of aqua-marine, mauve, sienna, and orange, all marvellously blended. The shades are continually varying with the ebb and flow of the tide, which at high water covers the reef to the depth of several feet, while at low tide patches here and there stand high and dry, or are covered by only a few inches of water; treacherous ground, however, on which to land, as the sharp coral spikes break under the feet, cutting the thickest leather, and perhaps landing you in a hole several feet in depth, with still sharper coral down below.

The highest edge of the reef lies towards the ocean, and a line of dazzling white surf marks where the great green breakers wage their ceaseless warfare on the barrier; but the passage through the reef is plainly marked by a break in the white line, and a broad roadway of deep blue connecting the inner waters with the great deep; and this, again, passes in gradual gradations of color from the intense blue of the harbor to the glittering green of the shallow water on the inner side of the reef. Altogether it is most fascinating. The scene is loveliest at noon, when the sun is right overhead, and lights up the colors beneath the water on the coral caves. Also you must be some way up the hill to get a good view of the reef. Of the radiant opal tints which overspread sea, isles, and sky, at the outgoings of morning and evening, I need not tell you; our own northern shores supply sunrise and sunset colors more vivid than we often see in the tropics.

This afternoon has been one of unmitigated enjoyment spent on the reef, where for so many days I have enviously watched the Fijian girls disporting themselves at low tide, and bringing back baskets full of all sorts of curious fish,

many of them literally rainbow-colored. Some are most gorgeous, and are called parrot-fish. They have large bony beaks, rather than ordinary mouths, to enable them to feed on the corals, which at certain seasons are said to be "in flower" and very unwholesome; so we always eat these radiant fish with some qualms, for some people have had the ill-luck to get poisoned, and have suffered severely in consequence.

[A boat trip to these reefs is thus described:]

When the tide is low and the sea without a ripple, you float idly over the coral beds, suffering your boat to lie at rest or drift with the current, as a stroke of the oar would disturb the clear surface of the water, beneath which lie such inexhaustible stores of loveliness. Every sort and kind of coral grow together there, from the outstretched branches, which look like garden shrubs, to the great tables of solid coral, on which lie strewn shells and sponges, and heaps of brain and mushroom corals.

These living shrubs assume every shade of color; some are delicate pink or blue; others of a brilliant mauve; some pale primrose. But vain is the attempt to carry home these beautiful flowers of the sea; their color is their life. It is, in fact, simply a gelatinous slime, which drips away, as the living creatures melt away and die, when exposed to the upper air. So the corals we know in England are merely skeletons, and very poor substitutes for the lovely objects we see and covet in their native condition.

Besides, like everything in that submarine garden, much of its charm is derived from the medium through which we behold it,—the clear translucent water,—which spreads a glamour of enchantment over objects already beautiful, glorifying the scarlet corallines and the waving branches of green and brown weed, wherein play exquisite fish of

all vivid hues and sizes, from the tiniest gem-like atoms which flash in the light like sapphires and rubies, to the great big-headed parrot-fish, which has strong white teeth specially adapted for crunching the coral, and thence extracting the insects on which he feeds.

There are great red fish, and purple green fish, and some of bright gold, with bars or spots of black; but loveliest of all are the shoals of minute fish, some of the most vivid green, others of a blue that is quite dazzling. Some have markings so brilliant that I can only compare them to peacock's feathers. They all congregate in families, and a happy life they surely must have. Some of the loveliest of these are so tiny that you can keep a dozen in a tumbler; others are about the length of your finger. Besides these myriads of minute fish there are all manner of living creatures which peep out from their homes beneath the ledges and crevices of the coral,—vigilant crabs of all sizes and colors, and sea-anemones in endless variety, and wonderful specimens of echini. . . .

To-day we captured a most extraordinary creature, a star-fish which seemed as if it must be nearly related to the sea-urchin, for its fifteen arms were each covered with gray and orange spines, very sharp, precisely like those of the echinus, while the under side was a mass of pale-yellow fleshy feelers, like those of a sea-anemone, with a sucker at the end of each. It was a strange and most interesting creature when we first beheld it, but looked very unhappy when it found itself in a bucket; and when reduced to a "specimen" it will be a poor ugly object. . . .

The existence of these barrier reefs is an unspeakable benefit to the isles, supplying them with natural breakwaters and harbors, surrounding each with a lagoon of calm, shallow water, on which the smallest boats can ply as safely as on an inland lake, and within shelter of which

they can, in most places, pass from one isle to another. There is invariably a passage through the reef opposite the mouth of any river, as the coral insect cannot live within the influence of fresh water. Thus an entrance is secured to the haven of rest, and a very straight and narrow way it often is, and one which calls for careful steering, when the angry breakers are dashing in mad fury on the reef on either side,—great rolling waves curling upward in a succession of mighty walls of green water, and falling in such a surging cataract of foam as would make short work of the luckless canoe that should drift within their reach. Once inside the reef all is secure, save when some unusual storm troubles even these calm waters, as it might ruffle the surface of any lake.

[From the water our traveller goes to the land, and gives us a suggestive bit of description of the island.]

I have just come in from such a scramble. Certainly these hills of Ovalau are most tantalizing. From the sea they do look so attractive, and not particularly difficult to ascend; but when it comes to the attempt, you find that even in the rare instances where the semblance of a foot-path exists, it takes a very good scrambler to follow it, over great boulders of rock, or up almost perpendicular banks of soapy mud. Should you attempt to leave the path, you find it almost impossible to force a passage through the dense underwood; and even the tracks, which from the sea look like grass, turn out to be tall reeds, reaching far above your head, and matted together with strong vines, which totally prevent your advance, and large spiders' webs, which cling to your face and hair. Still, it is worth a considerable exertion, for the reward of at length reaching some point whence you look down on the lovely sea and all the far-away isles.

This island is itself quite beautiful, though by no means a desirable one on which to establish a capital [it contains Levuka, the capital of the Fiji group], as it consists entirely of very steep hills, rising to a height of about three thousand feet, crowned with great crags, and rent by deep gorges densely wooded. The only available building land is a narrow strip on the edge of the sea; and though, of course, the lower spurs of the hills may eventually be dotted with villas, there is no possibility of extending the town unless by expensive terracing,—a game which would certainly not be worth the candle, as saith the proverb.

I must say the little town greatly exceeded our expectations. We had imagined it was still the haunt of uproarious planters and white men of the lowest type, described by visitors a few years ago, instead of which we find a most orderly and respectable community, of about six hundred whites, inhabiting one hundred and eighty wooden houses. We are told that the reformation in the sobriety of the town is partly due to the Good Templars, who here muster a very considerable brotherhood. Doubtless their work is greatly facilitated by the increased price of gin, which in former days flowed like water, at the modest price of one shilling a bottle, but has now risen to five times that sum. It used to be said that ships needed no chart to bring them to Fiji, for they would find the way marked by floating gin bottles, increasing in numbers as they approached the group. Those were the days when men meeting at noonday to discuss grave matters of business found their deliberations assisted by a jug of raw gin, to be drunk in tumblers as other men would drink water. Certainly if the multitude of broken bottles which strew the beach were any evidence of the amount of liquor consumed, we might imagine that the old drinking days were not yet wholly forgotten. . . .

In one respect we are greatly disappointed in this place, —*there are scarcely any flowers.* This strikes us all the more, as we have come here direct from Australia, where we left the whole country literally aflame with blossom. And here in the tropics, where people always vainly imagine that flowers are so abundant, we have fewer than in any place I have yet been to. . . . As to wild flowers, I have walked day after day till I was weary without finding as many flowers as would fill a small vase.

The ferns, however, are exceedingly lovely. Innumerable species grow in richest profusion in every damp ravine, and great tufts of birds'-nest and other ferns cling to the mossy boughs of the gray old trees. Every here and there you come upon a rocky stream or shady pool round which they cluster in such luxuriance and variety that it makes you long to transport the whole fairy-like dell to some place where all fern lovers might revel in its beauty. And this is only the undergrowth; for the cool shade overhead is produced by the interwoven fronds of great tree-ferns, their exquisite crown of green supported by a slender stem from twenty to thirty feet high, up which twine delicate creepers of all sorts, which steal in and out among the great fronds, and so weave a canopy of exquisite beauty. Loveliest of all are the delicate climbing-ferns, the tender leaves of which—some richly *fringed* with seed—hang mid-air on long hair-like trails, or else, drooping in festoons, climb from tree to tree, forming a perfect net-work of loveliness. It is a most fairy-like foliage, and the people show their reverence for its beauty by calling it *Wa Kolo*, or God's fern.

I ought to mention that though there are no flowers within reach, there are several flowering trees with unattainable and, happily, not very tempting blossoms. These are all alike remarkable for having a most insignificant calyx, and being almost entirely composed of a great bunch

of silky stamens which fall in showers on the ground below. The most attractive of these is the *Kaveeka*, or Malay apple, which bears tufts of crimson blossoms especially attractive to certain lovely scarlet and green parrots with purple heads, and which in due season bears a very juicy though insipid crimson or white fruit. These parrots are few and far between, and I miss the flocks of bright wings which so delighted me in my glimpse of Australian bush. . . .

I suppose you know that one of the remarkable peculiarities of these isles is the strange lack of animal life. There were literally no indigenous four-footed creatures except rats and flying-foxes, and even the native rat has died out since foreign rats arrived from ships. Even the pigs, which in some places now run wild in the jungle, were originally introduced by the Tongans, who also brought cats, ducks, and fowls.

Happily, the list of Fijian reptiles is equally small, so that flies and mosquitoes are almost the only creatures we have to combat, and they are an irritating plague. We know that centipedes and scorpions do exist, but they are very rare. I wish I could say as much for the cockroaches which infest every house, and are in their turn devoured by large spiders. I lay awake this morning watching the process. The unlucky cockroach contrived to get entangled in a strong web, and old Mr. Spider darted out and tied him up securely, and then feasted at his leisure. Of course we carefully cherish these spider allies, and glory in webs which would greatly horrify your housemaids. The ants are also most energetic friends, and organize burial-parties for the cockroaches as fast as we can kill them. Every morning we see solemn funerals moving across the veranda to the garden, and there are parties of about one hundred of the tiniest ants dragging away the corpse of a large cockroach.

Happily, serpents are almost unknown, and the few that exist are not venomous. So we walk through densest underwood, among dead leaves and decaying timber, without fear of meeting anything more alarming than innocent lizards or an occasional land-crab. Of lizards I have seen a large green kind, and scores of a tiny blue and bronze, which flash like jewels in the sunlight.

[The author goes on to describe a picnic-party on the island of Moturiki, the private property of Thakombau, recent native king. One of the party was Sir Arthur Gordon, governor of the island group. The making of *yangona*, a native beverage, is thus described:]

Sir Arthur considers that a punctilious observance of the principal points in native etiquette is a means to secure respect and gain influence with the people who now hail him as their highest chief; so, among other ceremonies that have to be observed, is the invariable brewing of yangona (which you have heard spoken of in other groups as the *kava*). This, from a purely artistic point of view, is a very attractive scene, so I will describe it to you minutely. Picture to yourself the deep shade of the house, its brown smoke-stained rafters and dark thatch-roof, with a film of blue smoke rising from the fireplace at the far end, which is simply a square in the floor edged with stones, round which, on mats, lie the boatmen, and a group of natives with flowers coquettishly stuck in their hair, and very slight drapery of native cloth, and fringes of bright croton-leaves.

A great wooden bowl, with four legs, is then brought in. It is beautifully polished from long use, and has a purple bloom like that on a grape. A rope is fastened to it, and the end of this is thrown to the chief. The yangona-root is then brought in, scraped and cleaned, cut up into small pieces, and distributed to a select circle of young men to

chew. The operation is not *quite* so nasty as might be supposed, as they repeatedly rinse their mouths with fresh water during the process, which occupies some time; while all the company sit round most solemnly, and some sing quaint *mékés* (*i.e.*, choruses), very wild and characteristic. They are so old that many of them are incomprehensible even to the singers, who merely repeat the words in an unknown tongue, as they learnt them from their parents.

When the chewing process is complete, each man produces a lump of finely-chewed white fibre. This is then deposited in a large wooden bowl, and one of the number is told off to pour water on the yangona, and wring it out through a piece of hibiscus fibre, which is like a piece of fine netting. A turbid yellowish fluid is thus produced, in taste resembling rhubarb and magnesia, flavored with sal volatile. It is handed round in cups made of the shell of large cocoanuts, the chief being the first to drink, while all the onlookers join in a very peculiar measured hand-clapping. When he is finished they shout some exclamation in chorus, and clap hands in a different manner. Then all the others drink in regular order of precedence.

Though no one pretends to like the taste of yangona, its after-effects are said to be so pleasantly stimulating that a considerable number of white men drink it habitually, and even insist on having it prepared by chewing, which is a custom imported from Tonga, and one which has never been adopted in the interior of Fiji, where the old manner of grating the root is preferred. It certainly sounds less nasty, but *connoisseurs* declare with one voice that grated yangona is not comparable to that which has been chewed. The gentlemen all say that sometimes, when they have had a very long day of hard walking, they are thankful to the native who brings them this, the only stimulant which he has to offer, and that its effect is like sal volatile. Con-

firmed drinkers acquire a craving for it. Its action is peculiar, inasmuch as drunkenness from this cause does not affect the brain, but paralyzes the muscles, so that a man lies helpless upon the ground, perfectly aware of all that is going on.

AMONG THE PAPUANS.

THEODORE F. BEVAN.

[The "Toil, Travel, and Discovery in British New Guinea" of Theodore F. Bevan yields much interesting information concerning the people, scenery, and modes of life in that great island of the South Seas, which has only recently been claimed as the property of European nations. We select from it some passages indicative of an explorer's life and experiences.]

ON June 6, 1885, I journeyed overland through a rough hilly country to Bonna Bonna, and found that neatly-kept village thronged with visitors from the mainland, their numerous canoes drawn up above tide-mark on the beach. Away beyond Mullens Harbor was the narrow isthmus connecting with Milne Bay, and which was probably formed at no very remote date by alluvial deposits brought down from the high mountains by numerous mountain torrents, and emptied into what was then probably a narrow strait, disconnecting no inconsiderable portion of the present mainland. The view of New Guinea that morning was a specially glorious one, for there, along fifty miles or more of range, seas of mountains (in every shade of blue and purple) rose wave-like to a height of six thousand feet and upward, among which one or two odd pinnacles shone, like inverted icicles, clear-cut against a cloudless sky.

But here, close at hand, under the shadow of the primeval

forest, where flowering mucunas spread a carpet of red and yellow velvet, which it seemed like a desecration to profane with footfall, a pagan rite was performed. On a rude platform environing a giant mango-tree squatted a venerable chief, while around him surged a shiny concourse of both sexes, decorated with shell-work and brilliant head-gear of plumes and flowers and feathers. Over glowing embers half a dozen pigs were suspended, heads downward, which, when singed, were cut up on the platform into small pieces of a pound or so in weight. Then, as each man's name was called out, with the affix "Oh!" every one in turn stepped forward to receive his share.

While watching these strange proceedings as an interested spectator, I was surprised to hear "*Dimdimmy* . . . Oh!" announced, and, being of course the only white man present, had to move in front, the cynosure of all eyes, to receive a piece of raw pork, a bunch of bananas, some yams, and half a dozen old sprouting cocoanuts,—in fact, more than an armful. Even the sacred "Igdrasil"-tree was not forgotten, and a double share was suspended in its branches.

Then the assemblage drew back on either side, leaving a clear space, into which a full-grown man stepped, and another phase of the proceedings commenced. From walking once or twice along a prescribed line, he gradually quickened his pace into a run, stamping emphatically when in the act of turning at either end. Then he commenced an incantation (or, perhaps, more correctly speaking, imprecation), swung his arms and a tomahawk round in a whirlwind of sand, and left off, "steaming." Next came a lame old warrior, who hobbled over the course, and (amidst the loud laughter of the mob) screeched his invectives until he, too, subsided from exhaustion, fairly foaming at the mouth.

"And what was all this storm in a teacup about?" you inquire. Well, simply that the sorceress of a rival village had decreed that "*all the Bonna Bonna pigs should die;*" so, with the object of "taking time by the forelock," these benighted heathen were giving a series of feasts and indignation meetings, and in this way were unconsciously verifying the prediction of their enemies by killing their own pigs, instead of waiting till they died a natural death. I waited for an hour or two to see if there were any fresh developments, but, finding none, started on the return journey (not a little disgusted at what Carlyle would have called "such hideous inextricable jungle of misworships, misbeliefs").

I again rejoined the "Pride of the Logan" in the narrow strait between Dufaure Island and Nabargadila (an islet on the southern side). At our anchorage near the islet we heard for several nights a native chant, not unpleasant in its monotony, as the soft waves of sound rose and fell to an accompaniment from deep mellow-toned drums. Stealing ashore on one such occasion, I crept close enough to the mummers to witness their performance, at the same time without giving them cause for shyness. In the centre of the village square stood a circle of male musicians, alternately beating a tattoo, or warming their drums (made of cylindrical pieces of wood shaped like hour-glasses, with a covering of snake- or iguana-skin drawn tightly over one end) over a fire of glowing embers. Men wearing grass petticoats, and women holding spears and shields, swayed round and round the mystic circle in slow but effortless gyrations, while in an outer ring pairs of children early learned to imitate their elders. Ever and anon, above the mournful chorus, rose the howls of village dingoes, till both, blending together, died away temporarily into an indistinct murmur like the roll of distant surf upon the sand-

flats. For hours the mythic, prophetic chant continued, till the silvery moon or approaching sunrise quenched the torches and flickering firelight of the pagan rite being enacted in that deep-drawn recess of the dark forest glade. On these occasions it is the custom of these primitive people to minutely catalogue in song all their material wants.

While at Nabargadila I witnessed a simple but interesting native ceremony of conciliation. Four canoe-loads of both sexes of the villagers (the males having their arms made fast on their breasts) crossed over to Argyle Bay, where they were met by a similar number from an Orangerie Bay village with which they had previously been at war. Then a palaver; and indemnification ensued by various presents changing hands; a feast was held, and pacification accomplished for the time being, until some trivial circumstances should cause the feud to break out again with renewed rancor and barbaric remorselessness.

At these miscalled feasts the food is not, as one would expect, cooked and eaten at the time, but is instead carried away, and either given to friends or privately consumed. Anything synonymous to a "picnic" is to them unknown.

The Chinamen had exhausted their opium supplies some six weeks previously, and the unwonted deprivation had had a most marked effect on their complexion, temper, and appetites.

On the afternoon of June 14, Ah Gim, usually a quiet, humane, and peaceful man, had been sitting on deck talking to his wife (a South Sea Island woman, who had joined the schooner at South Cape). Suddenly he sprang up, and, with a shout of "Eddivarga? I'll shoot him!" dived into the cabin, returned on deck with a loaded Winchester rifle, jumped into a dinghy lying alongside, and strove to undo the painter. Then the Chinese made a rush, and strove to wrest the rifle from his hands. Ah Gim turned a deathly

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hue in his passion, nothing showing but the yellows of his eyes, and tried to pull the trigger on his own countrymen. In the mean time I ran out on the bowsprit, and called out to Eddivarga to leave the beach and hide in the bush. No sooner was the gun wrested from him than Ah Gim sprang on board again, and seized a revolver belonging to myself lying in the cabin, but before he could get on deck was overpowered by his wife and the Chinese (who throughout behaved very pluckily), for it was evident that the man was quite mad for the time being. Not for an hour or so did he calm down, and then it transpired that his "missis," as he called her, had been "nagging at him," accusing him of infidelity; and after much persuasion disclosed that Eddivarga (the son of the chief at South Cape), who was then fishing for Ah Gim, had been her informant. On the following morning Eddivarga was presented by Ah Gim with a tomahawk, knife, and some tobacco, and a lasting peace was cemented between them.

[In August, 1885, Mr. Bevan decided on making a boat-trip along the coast of the Gulf of Papua, against the advice of the authorities, who represented the natives there to be turbulent and dangerous. He set out, nevertheless.]

I had never been farther west of Port Moresby before, but had felt a sort of fascination and attraction towards the vague mysteries of the Papuan Gulf, partly, perhaps, because it was largely a *terra incognita*, and partly, no doubt, from the sight of the great *lakatois* (trading canoes) brought annually to Port Moresby by black Gulf Papuans, with long, coarse features and great Roman noses. These *lakatois* are constructed of as many as fifteen large and long single canoes, lashed firmly together with rattan, and propelled by immense mat sails, constructed of frond stuff and fibre. Each of these singular vessels is capable of

carrying from thirty to forty passengers, and a similar number of tons of sago, which is exchanged with the Motu tribe of Port Moresby and neighborhood (chiefly for earthenware pots, or *chatties*, and trade obtained from Europeans).

As many as a dozen to twenty *lakatois* comprise the fleet, and (by utilizing the changes of the monsoon) a fair or soldier's wind is obtained either way, both going and returning.

Great-lunged, hirsute fellows are these Gulf Papuans; the blue thews and sinews of their giant bare limbs standing out like whip-cord, but thinly concealed under a copper-colored veneer. Rough, too, in their habits, for not only do the Motu women run away at their approach (as I have before mentioned), but they take "French leave" to whatever comes handiest. I have seen one of these visitors catch up a domesticated village dingo by the tail, extinguish its spark of life by a blow against the wooden piles of a dwelling, anatomize the mortal remains and grill the titbits, before making a hearty meal, all in the space of a few minutes. If report speaks true, bush natives captured (when out on their periodical forays) are treated in a similarly rough and ready mode. The above are some of the characteristics of the people I was about to visit.

The following day we were wafted down the coast by the favoring gale, and anchored early between Yule Island and the mainland. Hall Sound, as it is called, is not only a very beautiful harbor, but a fine one from a naval point of view, possessing plenty of deep water and anchorages sheltered in any weather. Over the rugged mountains to the north hung a great pall as of smoke, occasionally rimmed by pillars of liquid fire, as the jagged lightning played in vast fountain-sprays round Mount Yule (ten thousand and forty-six feet).

By leaving Yule Island at daybreak, I hoped to reach

my destination at the mouth of the Williams River before dark. The wind fell somewhat light, however, at mid-day, and it was night before lights on the low-lying shores were pronounced by my two dusky companions to be the village fires of Motu Motu. We flashed a lantern in return, and (as I had been told there was plenty of water on the river bar at all states of the tide for the "Electra") had little anxiety beyond that of "picking up" the entrance. Although the sky was overcast, one could clearly see the foam-caps on the great rollers, which tossed the little cutter high on their mountainous summits, and then surged by with monstrous curl and increased speed shoreward.

My natives professed to know the channels by instinct, and so we stood in to our fate until, before one dreamt of danger, we were among the breakers. Crash followed crash as the "Electra" struck heavily on the bar, and was lifted up by a wave which made a clean sweep of the deck, put the lamps out, and washed the boys overboard; while the sails, "with the might of the wind's wrath wrenched and torn," flapped shudderingly, and everything bid fair to subside into confused welter of ruin, hopeless and irreparable.

The horrid thought flashed through my brain that we might have been deceived by the lights. This much seemed certain, that we were only too assuredly shipwrecked, with the hungry sea astern, and rivers and lagoons swarming with alligators ahead,—with wild tribes all around.

Perhaps even then what troubled me most was the thought of what people would say (of the "I told you so," and "I knew it would be") at Port Moresby.

My natives seemed fairly mad with excitement; now clambering on board, and now sprawling on the sand as they were washed off their feet by the heavy rollers. At first I kept all sails standing, in the faint hope that the cut-

ter might drag over the bar, but then (fearing the strain) lowered them, and stripped off my light flannels in readiness for a swim. After half an hour or so of this hideous nightmare-like reality, a quite unlooked-for development occurred.

Fitful lights were seen approaching, and strange wild noises heard, and presently—half swimming and half wading through the breakers—some naked dusky forms reached the "Electra"; and great was the pandemonium as my natives tried to answer the interrogatories of the newcomers and make themselves heard above the roar of wind and sea; while the cutter would every now and again give a lurch and a plunge that threatened more destruction to the by-standers than would be occasioned by the heels of a kicking horse.

On ascertaining that these were Motu Motu natives, I struggled ashore with them and tramped through the deep sand for a mile or more up the beach, and aroused the wondering villagers. By and by I returned with some fifty broad-chested fellows, who (with the help of the rising tide) lifted the "Electra" bodily over the bar, and thence warped her along the bank to an anchorage behind their village, in the still water of a sheltered lagoon. Very thankful and tired did I feel after this temporary escape from the rude embrace of old Father Neptune. Next morning a clean and recent fracture (about the size of one's fist) was disclosed to sight in the cutter's side, just between wind and water. This blow might have been struck by a snag on the bar, but I could hardly free my mind from the sinister suspicion that it had been done by a native "wrecker." However, I fortunately had a little Portland cement on board, and filled the crevice with that paste, and when the patch was dry put the tar-brush over the spot; and the wound was made whole.

THE WORLD'S GREAT CAPITALS OF TO-DAY.

OLIVER H. G. LEIGH.

CALCUTTA, BOMBAY, BENARES.

India is the mystery land for all who go in quest of the old, in religions, in arts, in customs, in splendid monuments and holy shrines. There the loftiest mountains in the world touch heaven with their dazzling pinnacles. There, too, humanity touches the nethermost depths of degradation. Within its borders meet the old and the new, the extremes of ancient and modern civilizations, in outward harmony, of a sort, yet with a great gulf fixed between the unconquerable spirit of the Orient and the systems introduced by the present masters of its peoples. For Hindustan holds one people, the hills of Nagpur another, the slopes of the Himalayas another, and so its different races are distributed. A million and seven hundred thousand square miles of area, supporting three hundred millions of people, except the hundreds of thousands who perish from the periodical famines. The official reports state that the latest famine prevailed over an area of three hundred thousand square miles and affected a population of forty millions.

Seventy-eight distinct native languages are spoken, excluding those of modern Europe, and there are over one hundred dialects. There are about two hundred and thirty million people in British India, and about seventy millions in the native states. Of the total population two hundred and ten millions are of the Hindu faith, sixty millions are Mohammedans, upwards of seven millions are Buddhists, and about two and a half millions are Christians, not counting other religions. The native states are only nominally under native rule. Their friendly Mahara-

jahs pay tribute to the supreme government, which can dethrone any chief whose loyalty may be in doubt. India revolted in 1857. That mutiny was suppressed, but not entirely the slumbering discontent, which may break out at any time, if allowed. The peace is kept by a British force of seventy-three thousand troops, maintained at the cost of the country. Besides these there is a native army, numbering about one hundred and fifty thousand men, under British leadership. The revenue is raised chiefly from the duties on land, salt, and opium.

The natives have excelled for many centuries in various art-industries; silk and cotton weaving, metal work, the goldsmith's and jeweller's crafts, and native architecture and sculpture, have astonished the modern world.

To see the wonders of India in all their fascinating variety it is, of course, necessary to make long journeys through the country. Again it must be observed how inadequately any capital represents a country. Calcutta is the seat of the supreme government. It is in the province of Bengal, which has a population nearly as large as that of the United States, living in an area less than that of California. Calcutta was a mud hut village in the time of the great Emperor Akbar. About 1690 the English traders on the Hugli river moved from their then settlement to the present site, which has a fine anchorage, and the East India Company made the new town their headquarters. It lay so low that the death-rate among Europeans was appalling for seventy years. The new Calcutta boasts of being a City of Palaces. It had its dreadful tragedy, as most Oriental cities have. Everyone has heard of the Black Hole of Calcutta. The Nawab of Bengal fell upon the town and its sole defence, Fort William, in 1756. Most of the English escaped down the Hugli on a ship, but the remainder, one hundred and forty-six in all, were driven at sword-point into the guard-

room, which was only twenty feet square, and had only two small windows. Next morning only twenty-three came out alive. A Mohammedan force held the city for seven months until Clive won the battle of Plassey exactly twelve months after the tragedy of the Black Hole. From that time Calcutta grew in strength, prosperity, and healthy conditions. Its population is now about a million.

The time to see Calcutta is in the winter. The Governor-General, who is the Viceroy, keeps imperial state. Policy requires the observance of elaborate ceremonies in all official movements. The Maharajahs of the native provinces are treated with all the pomp due to royalty. Their frequent appearances, in person or by proxy, at court affords opportunity for the display of magnificence such as impresses the Oriental mind with a sense of the government's wealth and power. No viceroy of recent years has upheld this imperial dignity with such a lavish hand as Lord Curzon, whose American wife won universal regard for her queenly grace and tact. When viceregal receptions are held the sight is indescribably brilliant, uniforms, Oriental robes and jewels, and the distinctive court costumes of distinguished visitors from European countries, intermingle in splendid confusion. The very names of native dignitaries sound gorgeous as they are announced. Here are two or three chosen hap-hazard, from the Council of the Governor of Bombay: Mir Allahbakshkhan walad Mir Alibakshkhan Shabvani Talpur; Narayan Ganesh Chandavakar; Gokuldas Kahendas Parekh; Phirozeshah M. Mehta. One of the royal native ladies invested with the Imperial Order of the Crown of India bears this name, which might serve as a test of clear speech: Her Highness Lady Nundkooverbai Bhugvut Sinh Jareja, Ranee Saheb of Gondal.

After the recapture of Calcutta a grand two-mile promenade was constructed along the river bank, called the Maidan.

Here the rank and fashion of the capital take the air in carriages of every description, most of them driven by turbaned coachmen in white-robed livery. The heat is too oppressive for exercise of any kind in the middle of the day. The endless procession begins about five in the afternoon and lasts two or three hours, a spectacle richer of its kind than Paris or London can show. In fact there is no modern costume comparable in sheer wealth of color, gracefulness and money value, to that of an Indian prince, robed in state and wearing his ancestral gems. Even in one of our own cities these robes do not jar upon the artistic sense, though they are only in their proper surroundings in the East. The Maidan has great breadth, with rich grassy expanses and tropical plants of every kind, lending a natural framework of beauty to the scene.

The government buildings are worthy of the term palatial. Their modern design has a rather incongruous effect among the wretched streets and dwellings of the native quarters, and handsome as they are, they do not begin to compare in beauty and poetical magnificence with the famous monuments erected by natives centuries ago. In the Botanical Garden is the largest banyan tree ever known. It keeps throwing out more branches, from which tendrils drop to the ground and take root, growing up into strong trunks which, in their turn, send out other branches. The main trunk is fifty feet around, and these outshoots stretch as far as one hundred and sixty feet away.

A horrifying sight, yet one which attracts the stranger, is the native mode of cremation. There is a Burning Ghat, as they style what we call a crematorium, at Calcutta. The Hugli is a sacred river, being one of the mouths of the Ganges. It is proper to die, if one can, as near its waters as possible. Until the custom was stopped by the government, the ashes after cremation were flung into the river in

CALCUTTA

which the filthiest and most diseased people bathed and drank. The relations of the deceased carry him, dead or dying, to the Ghat, where a dollar's worth of lumber is bought to make the pyre. When all is ready the son, or nearest male kin, sets fire to it without ceremony.

The city of Bombay divides with Calcutta the honor of primacy among the cities of India. It has seen vicissitudes, but has a population closely approximating that of the capital. It is in a sense more truly the metropolis than the Bengal city, because in natural scenery, sanitary position and general attractiveness it ranks first among Indian cities. The island, or peninsula, of Bombay came into the possession of the English as part of the dowry of the Portuguese wife of Charles II., who made it over to the East India Company. The approach from the sea gives one of the grandest panoramas in the world, a grander Bay of Naples. The harbor is studded with picturesque islands, and is enclosed by majestic mountains. The harbor is nearer the Suez Canal than Calcutta is, which has done much to restore a prosperous trade that declined two or three years after the American Civil War. When hostilities commenced America's supply of cotton to England ceased. This was a golden opportunity for India. A great demand was made for Indian cotton. Large fortunes were made by the new trade, and then followed a reaction, and financial disaster. This has been balanced by a steady expansion in trade.

The city itself has many charms. The Parsees are among the wealthiest citizens. Highly-cultured, generous, and patriotic, they have done much to add to the renown of Bombay. Not only there, but in London there are costly monuments in honor of the late Queen, and other distinguished persons, erected by Parsee merchants. In Bombay they have endowed hospitals and schools and other institu-

tions. The native quarter has as elegant mansions as are to be seen in the European district, designed in perfect harmony with the place. The houses usually stand in a garden enclosure. The fashionable suburb and paradise is the renowned Malabar Hill, a high ridge running out into the sea and terraced to the top with handsome houses, which command an unsurpassed sea-view. Bombay, like Boston, has its Back Bay, enclosed by Malabar Hill and the opposite promontory where the old fort stood. The stately pile of the High Court buildings, the grand Public Building, and the Elphinstone High School are splendid examples of modern architecture. The Buddhist and the Hindu carry the doctrine of the sanctity of human life to the animal world. Belief in the transmigration of souls operates with questionable wisdom when it prevents the killing of animals and other creatures for food, or for the prevention of suffering among them. There is a great hospital for animals in Bombay where a motley assemblage of beasts, birds, reptiles and insects are carefully tended till their ailments end in recovery or death. It has been suggested that this extravagant reverence for life is responsible for the twenty thousand annual deaths from snake-bites and the thousand lives lost because of unexterminated tigers. It would seem a pity to drive the real king of beasts out of existence, even though he does make an occasional lunch on careless humanity. He is a splendid fellow-creature, whom it is a pride to hunt because he is more nearly a match for men armed with modern guns than any other victim of "sport." But there is no arguing down a deep-rooted religious faith. The poor Hindu, to whom a sure and certain five cents a day for life would be the height of good fortune, has the merit of humaneness to a degree which should put some of our superior selves to shame. If he rides his hobby to death there is still something to admire in his adherence to his

religious principle to the full extent of martyrdom, for he dies of starvation rather than save his life by sacrificing that of a fellow-being, however humble, whose right to life and happiness he believes to be as clear as his own.

The marvellous Caves of Elephanta are only six miles from Bombay. Whoever has been down in a coal-mine, or threaded some caverns in the mountains, can faintly imagine the impression he will receive when he explores these baffling temples hewn in the solid rock. Great massive columns support the roof, carved in exquisite fashion, with capitals ornamented and plain. On the walls and often standing out in relief like separate statues are figures of the deities, from twelve to twenty-five feet high. There are many of these temples in India, and this is not the largest, though it extends inwards for one hundred and thirty feet and has twenty-six sculptured pillars. These cave temples are all ancient, some of them supposed to be over two thousand years old. The genius which could turn the bowels of the rocks to such lofty use, and adorn the hidden chambers of prayer with such wondrous art-craft, has a core of immortality which neither subjugation to alien races nor the temptations of other faiths are ever likely to affect.

Bombay is liberal to every religious belief. The possible peril, which some think they foresee, lies in the direction of the Mohammedan hordes. Consummate skill in dealing with the ignorant masses in India has thus far stalled off any outward signs of what is curiously designated a holy war. Still, the embers of fanatical fire never cease to smoulder, and the veriest trifle, as it might seem to Eastern eyes, may precipitate an uprising. The use of animal fat in gun cartridges led to the terrible mutiny of 1857.

India has still another capital, Benares, the ancient sacred city, to which seven hundred millions of pious Hindus and

Buddhists long to make a pilgrimage before they die. The sacred Ganges flows by the city sacred to Buddha these twenty-five hundred years, as the river is sacred to Brahma in whom it has its source. This belief is not affected by the knowledge that the river at this, its holiest spot, is polluted by sewage and the bodily filth of the hordes of true believers, who plunge into its malodorous waters, not to be physically cleansed, but to be spiritually saved. Corpses of infants are no longer found among other putrefying flotsam, because that practice has been stopped by law. Along the three miles of city front runs a sheer cliff, down which are cut wide steps, which are thronged with pilgrims and pietists of both sexes and all ages bent on taking their holy bath. They also wash their often lively if scanty clothing, incidentally sipping handfuls of the precious stream. Pure drinking water is supplied by the government, but as it is not sanctified, the river has the preference. The acme of bliss is reached by those who take a dip in the Well of Purification, a pool of Siloam on a larger scale, supposed to be on the spot where Vishnu dug a well. To the faithful it is still enriched with the sweat of his honest brow, hence the ardor with which it is drunk by the bathers in it. Less fortunate devotees pay the priests handsome fees for spoonfuls of its purifying liquid.

The gods with which Benares abound meet every taste, from the beautiful to the obscene. Every craft finds here its patron saint, from that of the priesthood to the beggars. In the temple grounds the sacred bulls and cows luxuriate, safe in the inner consciousness that they will never be killed. If any of them get out of bounds and wander through the bazaars, as they sometimes do, they help themselves to any dainties they fancy and no man says nay. Five hundred monkeys, also sacred, though no one would guess it by their antics, have a temple all to themselves. For three

thousand years Benares has been the shrine to which an unbroken procession of devotees has dragged its slow length, devotees who will be more than content if they die the moment they reach its river. Who can doubt that for three thousand years to come the same belief and practice will prevail? Government stopped the life-crushing Juggernaut car, but it would roll again to-morrow if the people had their will. Fanaticism seems proof to all correction. The Buddhist and Brahmin who mortify the flesh in a hundred shocking ways were rivalled by Christian ascetics in the first centuries. The Eastern temperament is more intense than the Western. It may be accounted to them as a virtue for all we know.

These three memorable capitals exhibit the working of the Indian law of caste. In spite of steady efforts for a century to break down its mighty power it remains practically as strong as ever. The present writer was once in a private company of scholars, among whom were two or three of eminence, including a member of the Brahmosomaj and a high-caste Brahmin. Towards the close of a remarkable general discussion of this subject the latter, in a moment of exaltation, put his hand in his bosom and plucked out the sacred thread of his order, and, breaking it, declared he had thereby forever renounced his faith and caste. If that were so he could never recover it while in India, and the result would be virtual outlawry.

The Brahmin caste are born to the divine right of rule, even though poor, for they sprang from the lips of Brahma. From his arms came the soldier caste, from his thighs the trader caste, and from his feet the common working caste. The eating of flesh is defilement. The most depraved Brahmin, if any such exist, is still more holy than the worthiest, low-cast devotee. The tyranny of this system is more intolerable than any kingly oppression, yet millions

bear it resignedly. Buddha opposed Brahminism and inculcated the more godlike precepts identified with that venerated name.

What impresses the traveller in India is the listlessness, amounting to fatalism, of its people. If horses knew their power they would take less kindly to harness. If the two hundred millions of lowly natives could pluck up a little courage and pay less heed to their beatitude—to be attained by becoming poor in spirit, there might be a light in Asia that would shine in concerted efforts to work out their own salvation. As things have been, so will they be. The growths of millenniums are not to be stopped or changed in a century. Famines do for the excessive population of India what wars used to do in Europe. But famine-bred generations cannot possess the qualities of soldiers' posterity. Nature is not on the side of the poor Hindu. She is even merciless to him in his pitifully handicapped struggle for such an apology for existence as a cent's worth of rice a day secures him. But India is a gold-mine for the Hindu's earthly masters.

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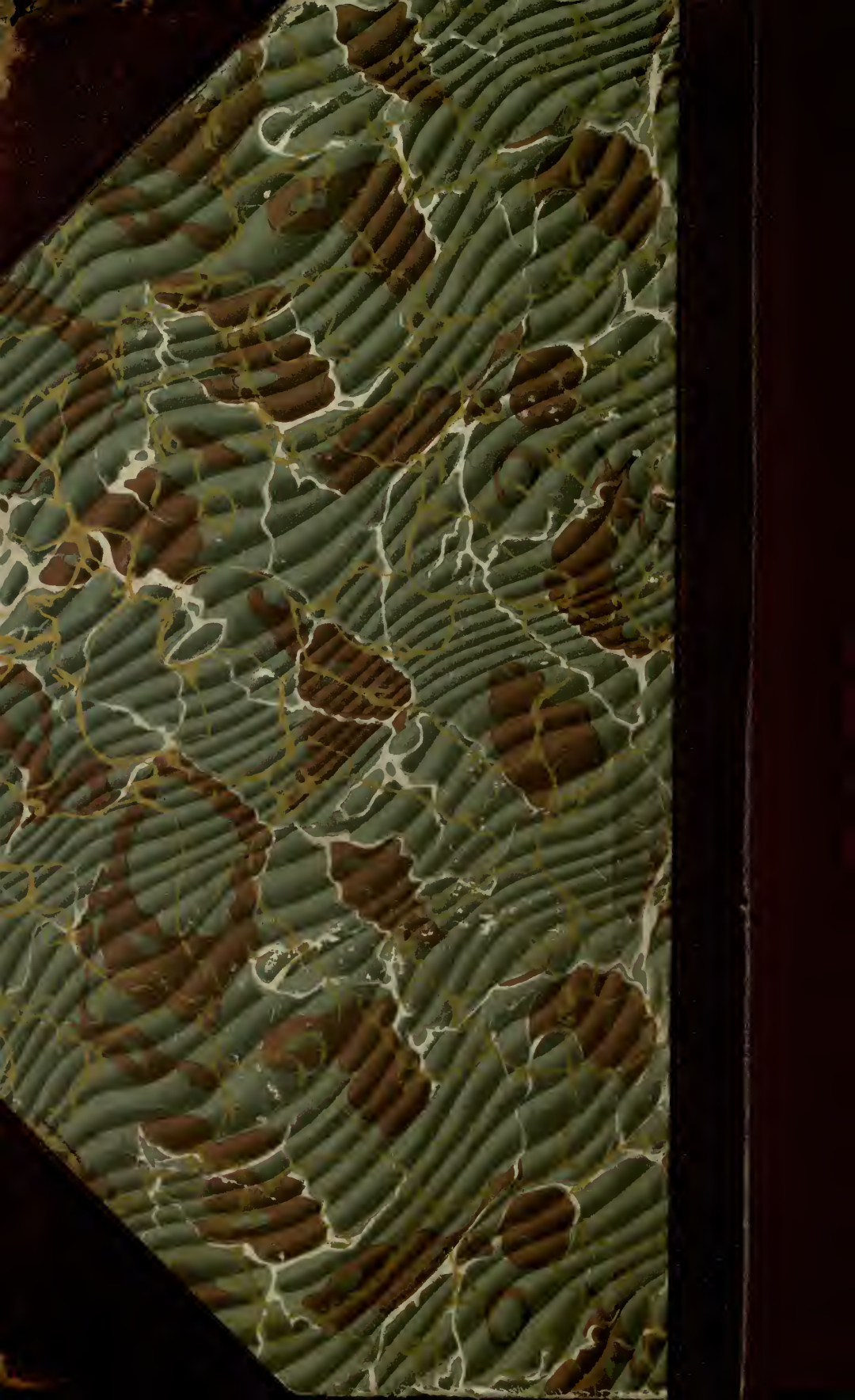
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